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THE ACADEMIC STUDY OF POLITICAL  
ECONOMY.

THE last quarter of a century has seen a remarkable development of political economy as an academic study. For special reasons connected with the organization of the universities and of institutions for liberal education generally, this development is not so marked in France or England as it is in Germany, in the United States, or, perhaps, in Italy; but it has everywhere been sufficient to bring forward economic science, from its old position as the curious pursuit of a limited class of specialists, to a recognized place as a department of thought, the further exploration of which must be carefully provided for by any well-equipped academic body. In our own country in particular, no one of the moral sciences has made a more rapid or solid gain than political economy, either in the extent and importance of its scientific investigations, or in the dignity of method and spirit which characterizes its work, or in its educational value.

The reasons for this important advance, it is to be noted, are in some degree independent of those which determine the value of economic science for the professional educator and make it for him an important branch of liberal training. For him it is a study which is to discipline and open the mind, and prepare it to meet the problems offered by professional work or by active business. The educational value of economic study has, in fact, but little to do with the actual content of the science. Even if it were, as has been said, a mere discussion of "lunar politics" or of social relations under the rings of Saturn, although it would lose in interest, it would still afford one of the best means of training the reasoning powers to deal with the questions of complex causes presented to us in such infinite variety by human life.\* In short, the value of political economy as a dialectic would remain, although it found no immediate application in the society around us. Probably every earnest teacher of the subject feels an interest in his work, then, and has in view the attainment of objects, entirely different in kind from the interest and the purposes which, to the non-professional observer, would seem to be most natural.

But the interest with which the general public view the academic study of economics and the wide-spread demand for its extension, as well as the pressure of students for introduction to its elements and its methods, no doubt spring from entirely different considerations. It is the perception of the scope and importance of the questions with which political economy deals that turns the popular current so strongly towards it to-day. It is keenly felt that on the right answer of these questions must depend not only the future progress of society, but also the preservation of much that has been gained by mankind in the

\*See some excellent remarks on this subject by Professor Patten, of the University of Pennsylvania, in his paper on *The Educational Value of Political Economy*, in the publications of the American Economic Association, vol. v., No. 6, p. 11.

past; and it is inevitable that the community should desire to see such problems investigated under the conditions and by the methods which are found to be fruitful in other departments of study, and to have the younger generation trained for economic reasoning and investigation as thoroughly and assiduously as they are for the languages or philosophy or natural science. We say advisedly that "the community" desire to see this; for nothing is more striking than the interest which those who are called practical men often show in the prosecution and encouragement of this class of studies, in which nevertheless they take but little part directly. That the scientific man and the practical man are apt to lack each other's strongest qualities—and so are complementary to each other, but are rarely complete—is a notorious cause of misapprehension and waste of energy;\* but in this case we have both working together, in their common eagerness to promote the investigation of economic questions, as they might for the promotion of the natural and physical sciences, which so readily fix the attention of the non-professional observer. We can go farther, and say that public opinion in general, in the countries which stand highest in the intellectual scale, is catholic in its judgments of the results of economic investigation, tolerant of differing opinions, and fully awake to the essential importance of complete freedom of thought and of expression. Especially is this the case in Germany, which for some years past has succeeded in maintaining the first place in this branch of learning as in so many others. Complete intellectual independence has there been con-

\*The remark of Mill may be recalled, that, "while the philosopher and the practical man bandy half-truths with one another, we may seek far without finding one who, placed on a higher eminence of thought, comprehends as a whole what they see only in separate parts,—who can make the anticipations of the philosopher guide the observation of the practical man, and the specific experience of the practical man warn the philosopher when something is to be added to his theory." *Essays on Some Unsettled Questions*, p. 157.

spicuous among the favoring conditions of intellectual progress.

The universities have everywhere found themselves encouraged and even required, therefore, to take up the investigation of economics with vigor and to push it by scientific methods. The leading European universities, it is well known, have long been raising the standard of their equipment and encouraging research in this as in every other department of learning. But, limiting our observation now to American institutions alone, even the last fifteen years have witnessed a complete transformation of their work in political economy. In the largest and most thoroughly organized of them, where time has generally been gained for an extended training, the independent examination of economic theories, the comparison and weighing of writers, the determination of the points at which important schools diverge, and the application in all cases of the logical test, which leaves no place for the mere authority of a name, have been carried to a point which even fifteen years ago would have been thought impossible.\* The study of economic history in its most important fields has been prosecuted with success, contributions of recognized value have been made to the literature of economics, and students everywhere have learned to watch with interest the results of American investigation and scholarship. The work that has been done, it is safe to say, has been done with increasing thoroughness and fidelity. The tone of American economics, often supposed to echo only the English school to which the scholars of every country are proud to acknowledge their indebtedness, has been modified in a singular way in favor of the free and continuous development of theory; and the study and interpretation of economic history, discarding the easy

\* Without attempting an exact measurement of the increase of work which has taken place, it is probably safe to say that in the six or eight leading American institutions the number of hours of instruction given per week to economics has increased on the average six or seven fold since 1876.



*post hoc propter hoc* of the partisan, has become the laborious and impartial search for the facts which test theories and exemplify principles. No "American school" has been developed in this rapid progress; but economic study in the United States, in the institutions of learning as well as outside of them, has had a serious part in the general movement of economic thought in the world at large.

This work has been carried on, as has already been said, by scientific methods and in accordance with a public demand that it should be so carried on. The question often raised whether political economy is in fact a science is not material here. Political economy at any rate aims to discover the forces which determine certain phenomena of society, their direction, strength, and mutual relations. It is, then, in any case a study of cause and effect, and as such must be studied in the scientific manner, whatever place may be assigned to it in the scientific hierarchy. The circle of emotions, hopes, and moral judgments springing from any economic fact, may be boundless; but the relation of that fact to its cause and its consequences is as certainly a question to be settled by appropriate scientific methods, as the perturbation of a satellite or a reaction observed by the chemist. And undoubtedly the essential of the scientific manner of study is, that truth alone should be the object of pursuit, and that the methods of investigation should be such as from the nature of the subject-matter will lead to the truth most directly and surely. That the results obtained by such methods should be agreeable or the reverse, that they should accord with prevailing ideas or interests or be in opposition thereto, is altogether aside from the purpose in hand. Are the results true? is the only test question to be recognized in such an inquiry. That the process of investigation or reasoning is not to be warped in order to make a given conclusion attainable, that any conclusion thus attained by illegitimate means is not only worthless, but noxious,

follows as a matter of course when the truth for its own sake is made the aim.

The universities, in general, are aided in their efforts to inculcate the scientific spirit in economic students, by a very important body of tradition and example within their own walls. The young student of political economy, who is urged to carry on his investigation as one of scientific interest, and not merely of transient political concern, cannot help feeling the influence and catching something of the spirit of the investigators at work in other fields around him. The patience, thoroughness, and singleness of purpose which mark successful efforts in the great body of scientific pursuits, set the standard for him. His own teachers may fall short of their own ideal of scientific method, they may even be untrue to it, and yet the observing student will feel the sweep of the great current which carries all genuine lovers of science towards the same end. This influence of the general intellectual movement has, moreover, been strengthened in no small degree by the change which has taken place in the methods of study pursued in political economy itself. The cultivation of the so-called historical method can never make political economy anything other than a deductive science, deriving its laws by logical conclusion from premises which are freed by abstraction from all non-essentials. But it would be idle to deny that the verification of conclusions by observation and the selection of new premises for further reasoning — in a word, that the thoroughness of the deductive process and the general scope of the study — have been advanced in a high degree by the improved methods of research and comparison, which have been made applicable in political economy as well as in other moral sciences. It would be difficult to find a writer upon economics, however severe his theoretical method, whose mental attitude does not show a remarkable change from the "stalled" condition in which his predecessors of

thirty years ago found themselves. And the student finds in this extended range of interest at once a stimulus to the acquisition of the best equipment and training for independent research, and a safeguard against the mere absorption of an expounded system. So far as the true scientific spirit has made its way, the student in economics, as elsewhere, more and more follows Bacon's injunction, to "read, not to contradict and refute, nor to believe and take for granted, . . . but to weigh and consider."

So much being premised as to the spirit and method at present governing the academic study of economics, in the leading institutions in all countries having any important place in the intellectual world to-day, we have next to remark upon the singular derogation from scientific methods implied in the demands frequently made in the last few years in the United States for some different and special treatment of the burning question of protection or free trade. That this question should be singled out for such demands is no doubt due to the fact that, especially since 1880, it has become political to a greater extent than for many years previously. As a political question, it is often treated by partisans in the heat of discussion as if its solution were the chief, and sometimes as if it were the only, aim of political economy. It would not be difficult to cite public speakers, very high in station, who have been altogether unable to recognize any other subject of interest in the economic field: whereas, it must be remarked for completeness of statement, international trade has to compete for attention, in any general survey of that field, with such broad and absorbing questions as those relating to money, land, labor, and socialistic reform, all of which antedate the free-trade controversy and are likely to disappear only with human society itself. These questions are all intrinsically as important as the question between a high tariff and a low one, and every one of

them probably concerns our material interests in even greater degree, and with our material interests others still more vital. But on no one of these subjects has dogma yet fairly crystallized into political platforms, and they are, therefore, still recognized by most of the world, as the proper subject-matter for unbiassed scientific inquiry; and the answer to be given by science is still looked for with interest, if not with hope.

The call for exceptional treatment of the question between protection and free trade is, in effect, a demand that upon a controverted point, as to which scientific opinions are not at one, political economy shall be made to give its answer in a particular, predetermined sense. This is the real purport of the complaints made by scores of public speakers in the canvass of 1888, and frequently repeated by the press, as to the supposed tendencies of the instruction in political economy in a large part of the American colleges and universities. The complaints, in most cases at least, did not relate to methods of training or investigation; for they were manifestly made without knowledge of the methods pursued. The gist of the complaints was that certain specified results of reasoning had been reached,—results not set down as eccentric and possibly indicative of individual lack of balance, but commented on as showing necessarily and of themselves a certain bias in the academic mind generally. In short, the attempt was made to judge of a body of scientific inquirers by reference, not to their processes, but to their opinions upon questions still *sub judice*. This was not far different from requiring of them the profession of a creed.

In some cases, the requirement of a creed has gone still farther, if very wide-spread report may be trusted. In more than one State university and in some minor institutions within the last few years, it has been understood, the purpose has been avowed of filling existing vacancies only by the appointment of men holding a particular set of opinions upon the vexed question. It has long been an

open secret that, at an earlier date, one important school of public economy was founded with the express provision that it should avoid the judicial attitude of a scientific body and establish an active propaganda of the views of its founder.\* It would be hard to find a parallel for such intolerance of scientific investigation and substantial indifference to truth as these cases disclose, in any institutions of equal standing, when dealing with any other subject claiming scientific rank. Indeed, the closest parallel to be found is that presented by the denominational theological schools, in which, a creed being required by the rigor of the case, any pretensions on the score of scientific character naturally take an altogether subordinate position. It is, in fact, difficult to imagine any corresponding requirement made of a professor of geology, or chemistry, or mathematics, and nearly as difficult to imagine it in the case of a philosopher, historian, or jurist. The case may indeed be cited of a seminary in South Carolina, the trustees of which, a few years ago, were so ill-advised as to displace a professor on the avowed ground that he was an evolutionist;† but this transaction was too much obscured by the *odium theologicum* to be important in the present connection.

More plausible, but not more defensible in reason, than the requirement of a creed is the suggestion not infrequently made, that upon a subject like this it is the duty of a fully equipped university to have instruction given upon both sides of the controverted question, and by instructors selected for this purpose,—not selected, therefore, as being the best available persons, irrespective of their opinions upon this matter, but selected because of

\*The secrecy which was judiciously maintained as to the text of the original instrument in this well-known case makes it impossible to cite the exact language here. It is understood that wiser counsels have ultimately prevailed, and that the impossible terms of the original foundation have been relaxed so as not to be inconsistent with the dignity of self-respecting scholars, or with the enjoyment of scientific reputation by the school itself.

† See the *Nation*, October 2 and December 18, 1884.

those opinions in order to represent opposing theories. Any individual dealing with such a question, it is maintained, must have his opinions formed. Let his desire to preserve a judicial impartiality in training and directing his students be, then, as great as it may, his own thoughts as to the conclusions to be reached, it is said, must needs give a bias to his instruction, and in any case must be evident to his hearers, carrying authority in their minds and thus tending to educate them exclusively to his views. Therefore, it is concluded, both sides should be presented with conviction by those who are qualified and anxious to set their respective opinions in their best light, and the ingenuous student should be permitted to make his choice of results freely. There can be no doubt that what is called a "joint discussion" thus permanently established in a university would be a highly attractive exhibition, and that by its aid a study sometimes found arid might easily be made entertaining. But here, again, there is probably no other subject in the academic range concerning which such a proposition would not instantly be covered with ridicule,—no other subject, with the possible exception of theology, in which the incongruity of establishing a man to preach a doctrine and calling this the promotion of science would not be instantly perceived. There may, indeed, be the case in which two expositors of a given subject by fortunate chance present it in different aspects, and true investigation may gain thereby; but this is something radically different from the proposition which we are now considering, to establish a permanent polemic between men selected as advocates, not to say as partisans.

The reason of this incongruity is not far to seek. Let us suppose by way of illustration that, by some change of public opinion, the socialistic movement should reach the political stage of development, and some proposition involving the main principle should find its affirmative or

negative in all the party platforms. Nothing could be more natural than for the socialists to declare that, for the right investigation of their system, the presentation of it by convinced socialists is absolutely necessary, that justice to their arguments cannot be expected from those who still cling to the old order of things, and that debate between advocates will best elucidate the truth. Indeed, the socialists might well set up to-day the demand for special representation upon the staff of any large university, if the importance of the question raised by them, its inevitable claim for an answer, and the risk of prepossession against them, are sufficient grounds for such representation. But, among the sober-minded seekers of truth — and we have no concern with anybody else — there would be little doubt that, in any such case, the process of systematic representation of adverse views would be the conflict of prejudices rather than a true investigation, and that it bears no likeness whatever to the careful and reasoned methods by which any scientific inquiry advances from step to step. In short, the method of treatment would be felt to be incongruous with the subject-matter. The same would be true of every question of economics, so far as it is a fit subject for academic treatment. The subject-matter is in every case a relation of cause and effect, requiring to be studied with a single eye to truth of result; but the proposed method effectually excludes the probability of such study on either side of the question, by presupposing advocacy, when the process of investigation plainly ought to be kept as free as is humanly possible from every disturbing influence.\*

After all, however, the question must remain, What is

\* There is, of course, paid representation of opposite opinions, and perhaps upon essentially scientific propositions, whenever a court hears a case argued by counsel; but this method of informing the highly trained mind of the court of all the considerations that can be presented on either side, as a preparation for its decision, has no analogy to the case of the university, where the minds addressed are, from the nature of the case, not yet trained, and the work in hand is not decision, but training.



the proper treatment of the disputed topics which necessarily come to view in the scientific exposition of political economy? As has been said above, these topics are not few in number, although few of them have reached the political stage. The economic and social effects of private ownership of land; the effects and the claims for preference of different methods of taxation, direct or indirect, upon property real or personal, and proportional or progressive; the choice between government currency and bank paper, and between the gold standard and the free coinage of silver; the choice between private and State ownership of public works; the powers and duty of the State with respect to combinations of capital on the one hand and of labor on the other; the fundamental question of all, as to the organization of society upon the basis of individual property rights or upon that of communism, qualified or complete,—such questions as these, no less than that between protection and free trade, fill the public mind, frequently divide enlightened opinion, and call for investigation by processes, if they can be found, as scrupulously scientific as those of mathematics. On some of these questions the judgment of the best trained economist may well be in suspense. On some of them, and perhaps on most, every earnest scholar is likely to have his opinion formed, and in that case, although his mind should still remain open for fresh light, is tolerably certain to feel his interest strongly engaged on the one side or the other. Such is the inherent difficulty of treating by scientific methods any subject which has a direct bearing upon the action or well-being either of society or of its individual members.

Nothing need be said here as to the necessity of impartiality of judgment, for that is of the essence of any scientific method. As little need be said of the frequently suggested claims of sympathy or patriotism, for these have their place in an inquiry of an entirely different order



from the search for economic truth. It is to be presumed that the guide in such a search preserves at any rate the consciousness of impartial purpose, and aims to keep his mind free from all influences foreign to the matter actually in hand. Giving him the benefit of this presumption, what is he to do with the occasions which lie all along his path for the statement or suggestion of individual opinion upon questions like those referred to above?

At this point we must recall the distinction often insisted upon by economists, and as often forgotten by them as by anybody else, between economic laws and the application of those laws in practical administration and legislation. The economic law, the deduction of pure science, is simply the statement of a causal relation, usually between a small number of forces and their joint effect, possibly between a single force and its effect. For the statement of that relation, the case has been freed from every disturbing element, and with the result, it is hardly necessary to repeat, of giving a proposition which, however important, is only conditionally true. The laws of value, in their simplest generalization, are true only under certain assumed conditions of complete competition. The law of rent is a fine example of a law of never-failing operation, which, however, is not usually seen with its conditions in the absolutely simple state in which the economist, for the purposes of reasoning, imagines them. But, when we come to the application of economics to legislation, we enter at once into a region of necessarily confused conditions, and also become conscious of objective ends often having little or no relation to any economic doctrine. For any purpose of legislation, the social and industrial conditions of a country—such as they have been made by long past history, by newly kindled enterprise, or by sudden calamity—have to be a guiding consideration. The present needs of a people have to be weighed, perhaps, against

what might seem to be its ultimate advantage; and what is socially or politically possible has to be accepted as the limit.\* The objects aimed at by legislation may also be entirely different from those suggested by simple economic deductions. For the purposes of the legislator, even the certainty of economic loss which is indicated by some unquestioned principle may be an entirely immaterial consideration, to be set aside as of no weight in comparison with the object in view, or as merely the cost which he can afford to pay for some great uneconomic gain.† We can even conceive the economist as deliberately contravening, in view of the general conditions of the case, what would seem to be the natural conclusion from his own doctrine,—as, for example, we may conceive a believer in the single gold standard advocating, in the present state of the world, international bimetallism, or *vice versa*. It is common, therefore, to hear the questions of legislation, which are to be determined in view of a confused mass of conditions, perhaps not closely related to each other, spoken of as “simple questions of expediency,” with the suggestion, implied if not expressed, that economic science has nothing to do with them. Questions of expediency alone they cannot be, for they involve all the action of economic forces; but they undoubtedly are

\*Mr. Keynes observes that “in a few departments, such as those of currency and banking, we meet with cases where, having determined the economic consequences of a given proposal, we practically have before us all the data requisite for a wise decision in regard to its adoption or rejection. But more usually—where we pass, for instance, to problems of taxation, or to problems that concern the relations of the State with trade and industry, or to the general discussion of communistic and socialistic schemes—it is far from being the case that economic considerations hold the field exclusively. Account must also be taken of ethical, social, and political considerations that lie outside the sphere of political economy regarded as a science.” *The Scope and Method of Political Economy*, p. 55. It may be doubted, however, whether, even in such departments as currency and banking, simple cases are so easily found as is here implied.

†And so Adam Smith says, “As defence, however, is of much more importance than opulence, the act of navigation is, perhaps, the wisest of all the commercial regulations of England.” *Wealth of Nations*, IV., ch. ii.

mixed questions, involving considerations of expediency, it may be of highly complex character, and therefore not to be determined by any purely scientific test.\*

Here we reach a distinction of some consequence with reference to the proper treatment of the great disputed questions. The investigation of economic law is a strictly scientific inquiry, as much as the investigation of the law of gravitation, and the determination of economic law falls within the competence of the university. Indeed, one of the great objects for which the university exists is to train minds for such inquiry and to further the advance of knowledge in precisely such obscure departments. But on the mixed questions of legislative policy and expediency, it is not the province of the university to pronounce. They indeed involve questions of science, as they involve much else; but their solution is not an act of the scientific judgment. It is, on the contrary, an act of the political judgment, enlightened by the aid of economic science, of jurisprudence, of the study of human nature itself, or whatever else may serve to clear up the matter in hand. The historical narratives in which the great questions of the past lie embedded are no doubt objects of university study, and the unravelling of their tangled threads affords a valuable training, by means of a subject-matter of unflinching interest; but it is no part of the business of the university to pronounce *ex cathedra* upon the policies which may find in such narratives some illustration, but which must after all rest upon indeterminate and probably transitory conditions. So, too, the great financial and industrial questions of the day supply the best of material for practice in the analysis of complicated problems and in the collecting and weighing of evidence; but in all this it is the acquisition of power in

\* Compare the common remark that "freedom of trade is good in theory but not in practice," which is a manner of saying that conclusions, scientifically correct in the speaker's opinion, must be applied with careful regard to extraneous conditions.

the dealing with problems, and not the solution of any practical question, that is the real matter in hand. The university may, and if successful in its true functions will, supply scientific data for the use of all who are concerned in the settlement of legislative and administrative questions; but, when to these data are added the many others which form a part of the basis for all practical decisions, the further declaration of opinion from the university chair becomes an *obiter dictum*, not necessary in the strict performance of duty, and raising some difficult questions of expediency.

The distinction here taken between strict scientific questions and mixed questions of science and expediency, it is true, is not usually observed. In a loose use of language, we are apt to speak of any question involving economics as an economic question, and to treat it, possibly until judgment is given against us, as something to be settled by scientific reasoning alone. But is there one such question which the wise legislator will dispose of in this manner, or as to which the considerate economist, whether in the chair or out of it, will give on scientific grounds an unreserved judgment? It is only by extending the definition of political economy itself, so as to include a vast region of politics and ethics, and thus destroying the possibility of all scientific precision, that we can describe as economic questions a great mass of those which commonly pass for such. This confusion of boundaries is no doubt often ventured upon, and with the eager student the temptation to it must always exist. Nevertheless, the line between political economy and the allied subjects appears to be drawn by reason and necessity, as well as by authority; and, being drawn, it brings with it the distinction here made between the questions of science and those of practice.\*

\* Professor Marshall observes that "it is not the function of a science to lay down practical precepts or to prescribe rules of life. The laws of economics, as of other sciences, are couched in the indicative, and not in the

The teacher of political economy must be supposed, however, as has already been remarked, to have his views upon the questions which lie beyond the strict limit of scientific conclusions; and as one who is much occupied with the subject-matter in one of its aspects, and so is familiar with its importance, he may be expected to hold his opinions with strong conviction and interest. But, in his capacity as teacher, is he to express these opinions or to withhold them? The way to an answer to this question may be partially cleared, perhaps, if we consider the general relation of instructor and student, as regards their respective conclusions upon the subjects of their study in common. In no moral science is there a body of truths, as in the exact sciences, capable of demonstration by a process which shall exclude the possibility of difference of judgment between instructed minds. The great service done by the instructor in moral sciences is, as has been said above, to train the mind of the student to scientific reasoning. That the student should learn to reason truly is of far more consequence than that he should perceive and accept any particular truth; and the real success of the instructor is found, not in bringing his students to think exactly as he does,—which is unlikely to happen, and indeed unnatural,—but in teaching them to use their own faculties accurately and with measured confidence. Even within the strict bounds of science, then, the instructor is little concerned with the greater or less uniformity of conclusion among his students, and is not properly con-

imperative mood: they are statements as to the effects produced by different causes, singly or in combination. They are not rules ready for immediate application in practical politics." And in a note, remarking upon the tendency of some writers, especially in France, to enlarge the scope of political economy so as to make it include practical politics, the same writer adds: "Of course an economist retains the liberty, common to all the world, of expressing his opinion that a certain course of action is the right one under given circumstances. And, if the difficulties of the problem are chiefly economic, he may speak with a certain authority. But so may a chemist with regard to other problems, and yet no reasonable person regards the laws of chemistry as precepts." *Principles of Economics*, i. p. 89.

cerned at all with anything like the propagation of his own views. He is interested in making his reasoning process clearly understood; but this is because of the value of the logical process itself, and not for the sake of producing conviction in the particular individuals addressed. There is no duty laid upon the instructor's conscience to satisfy every doubt and to inculcate certain propositions as absolute truth; but it is his duty to show how to practise clear analysis and just discrimination in scientific reasoning, and, if he has done this with success, he may well be content.

And when we come to the questions of applied economics, the questions in which science and political expediency both have their part, we come to a class of possible decisions which, according to the view here taken, it is distinctly the duty of the university instructor not to press upon his students. Dealing with such questions, as he must in order to make a comprehensive survey of his own proper field, it is his business to carefully disentangle the scientific considerations from all others, and to show their limitation as determined by the supposed conditions which underlie the scientific reasoning. But it is not his province to strike the balance between all the conflicting interests and arguments, scientific, political, and ethical, which actually present themselves for consideration. Still less is it his business to enforce the conclusions which, upon such balance being struck, appear satisfactory to his own mind; for, if as regards the questions of pure science he has an object in view more important than mere conformity of belief even in the best established truth, still more on the debatable ground must he give a subordinate place to such conformity. Indeed, looking solely at his relation as instructor, the assent of his pupils upon questions outside of the scientific range becomes as irrelevant as their agreement with his preferences in party politics or with his religious beliefs.

This, however, is not the same thing as to say that the instructor should suppress his opinions on the class of mixed questions now in view. His dignity may forbid a course which might be interpreted as concealment; and there are, moreover, few men whose weight of authority is such as to compel any extraordinary caution in the declaration of their minds. As a citizen, taking his part in the affairs of the community, the instructor has occasion to form opinions and to act upon them; and it is his right in that relation to do what he may to lead others to act with him. In the university, however, he is under other obligations; and there it is for him to decide, how far, with his habit of mind and his temperament, he can give expression to judgments lying beyond his proper sphere, and yet related to it, without injury to the severe neutrality of science which he is bound to preserve within that sphere. It may well be that no two men could follow with advantage the same rule in this respect. It has, sometimes been said of this or that teacher of economics, in the friendly comment of former pupils, that after long intercourse the teacher's opinion upon some great question of the day was still unknown to the pupil. The bearing of such comments is equivocal, depending very likely upon conditions of which no observer, however close, can judge. If the teacher's silence as to his own opinion was the result of fear of misconstruction or dread of controversy, his timidity deserved small praise. If he was silent because this appeared to him the only way to preserve the judicial attitude prescribed by his position, he may have laid down a stricter rule for himself than was necessary, and so, after all, may not have attained the highest success. If he was silent because the importance of holding his students to strictly scientific analysis and deduction, in which they would find their best training and most solid results, was always uppermost in his mind, and because any individual opinion

upon questions of a secondary order was therefore unimportant for his purpose and as it were intrusive, then, indeed, the comment is complimentary. But it is only the teacher himself who can determine whether it really does thus mark the self-forgetful devotion of his best powers.

CHARLES F. DUNBAR.



## THE DOCTRINE OF RENT, AND THE RESIDUAL CLAIMANT THEORY OF WAGES.

It is now more than three years since I troubled the readers of the *Quarterly Journal of Economics* with an article on the distribution of wealth; and the editor of the *Journal* is kind enough to think that it is not too early for me again to be heard regarding those peculiar views which have come to be known as the "Residual Claimant Theory." The discussion of the problem of distribution has proceeded very actively in the interval; and the theory in question has been made the subject of many remarks and criticisms, some of them just, some of them appearing to the present writer to embody certain misapprehensions of what was intended, or to result from a failure to observe the conditions upon which alone the theory would ever have been advanced. References to these latter, and some additional explanations of the suggested view of the relation of wages to the other shares in distribution, will, it is hoped, not exhibit the present writer as unduly sensitive to the criticism which he certainly should have anticipated. It is to be noted that the point of most active discussion has moved considerably during the past three years, and that it is not against the doctrine of business profits as analogous to the rent of land, but against the "residual claimant" doctrine of wages, that the most recent attacks have been directed.

I. In this *Journal* for January of the present year, Mr. Bonar has an article on "The Value of Labor in Relation to Economic Theory," which seems to me to do some injustice to the doctrine in question.

(a) Regarding the suggested correspondence between

increased productiveness of labor and increased wages, Mr. Bonar says, "By Walker's principles, the correspondence should be automatic" (p. 153, note). I am wholly at a loss to see how a writer so candid and so careful as Mr. Bonar could make such a statement. Not only was *The Wages Question* (1876) written largely on the theme that, if the laborer would realize his highest economic advantage, he must struggle for it without ceasing, the statement being again and again repeated that, if the laborer does not seek his interest, he will, in greater or less degree, lose his interest; not only has every subsequent work of mine insisted upon this theme, but in the first presentation of the residual claimant theory, in the *Political Economy* of 1883, the acquisition by the laborer of the possible gain resulting from the increased productiveness of labor was made conditional \* upon his being alert, active, and, so far as should be consistent with industrial peace, aggressive in the pursuit of his own economic advantage. After stating the position which the laborer appeared to me to occupy in the distribution of wealth, I followed this with the highly emphasized question, "WHAT WILL HE DO WITH IT?" and proceeded to argue that, in order to make good this ground of vantage, the laborer must follow the employer sharply up with a close and unrelenting competition; and, at every stage of that and of each subsequent statement of this view, "full and free competition" was made the essential condition under which alone the results shown to be possible would or could be realized.

It seems strange, therefore, to read in Mr. Bonar's arti-

\* "In determining how much, in the shape of rent, interest, and profits, shall be taken out of the product before it is turned over to the laboring class to have and to enjoy, I hold that the only security which the laboring class can have that no more will be taken than is required by the economical principles governing those shares, respectively, is to be found in full and free competition, each man seeking and finding his own best market, unhindered by any cause, whether objective or subjective in its origin. If the laborer does not seek his interest, he loses it in greater or smaller measure." Page 285.

cle (p. 154) that "President Walker's theory has sufficient presumptions against it to prevent any one using it (as the theory of a wages fund was once used) to deter workmen from taking action for themselves." I cannot forbear smiling at the suggestion that anything coming from me should be supposed to have a tendency to deter workmen from taking action for themselves. If the reader will recall the prevailing economic theories regarding wages prior to 1876, in which it was held that, if the laborer did not seek his interest, his interest would seek him and would find him; in which it was held that excessive profits infallibly "tend to become wages," covetousness being thus kept in check by covetousness and the desire for aggrandizement setting limits to its own gratification (Cairnes, 1874); if the reader will recall the unanimity with which it was agreed among English and American economists that the active self-assertion of the laboring class was neither necessary nor desirable in industry; and if the reader will thereupon be pleased to remember the general purport of all I have written regarding the laborer's part in distribution, including my discussions of strikes and trades-unions, and especially the frequency with which in those discussions it has been repeated that in economics there are gains which no man loses and losses which no man gains,—he will hardly deem Mr. Bonar's references to me appropriate or just.

(b) "The special difficulty of Walker's theory," however, Mr. Bonar finds in "its apparent inversion of the relationship of employer and employed, and the contention that wages are the leavings of profits, in face of the fact that wages are stipulated and advanced, and are, like interest on borrowed capital, set down among the expenses to be met before any profits are made" (p. 154). The phrase "apparent inversion" might create the impression that Mr. Bonar held it to be an open question whether such an inversion really took place; but, as he dismisses

that theory with this remark, it must be understood that he regards this "special difficulty" as insurmountable.

It is true that this apparent inversion of relationship has proved a very serious obstacle to the acceptance of the view of the residual nature of wages, alike by the public mind and by many economists; but is the fault with the theory or with those who regard it? The rent of land is, by force of contract, taken out of the produce before it is even ascertained that the cost of production will be met. But what controls the contract of rent? Is it not the estimated productiveness of the soil? And, if the experience of the cultivator during the continuance of the lease shows that this productiveness has been wrongly estimated, will not the new contract of rent be made with reference to a better knowledge of the capabilities of the land? So, in the case of labor and wages, while, in any individual transaction, the laborer does by the force of contract receive only stipulated wages,\* yet in the new contract of labor, whether the next month or the next day, he is at liberty to make, and, if I am not mistaken in what I have undertaken to show regarding his relation to the product of industry, he is in a position to enforce † a demand for wages which shall take up any gain in productive power, not involving a resort to poorer soils or to an inferior grade of employers or requiring any larger use of capital. That such an increase of production may take

\* This was clearly expressed in the foregoing terms in my *Political Economy* of 1883 (p. 265). Yet Mr. Gunton in his latest work writes as if I had completely overlooked this apparent inversion of relationship, and attributes to me "an astonishing amount of inconsistency" in that I speak of the laborer as the residual claimant upon the product of industry, having previously exhibited him as receiving wages stipulated in advance. *Principles of Social Economics*, p. 179.

Mr. Gunton thought better of my work when, in his reply to Karl Marx, he adopted entire, though without acknowledgment, my statement of the origin and source of profits. See *Political Science Quarterly*, vol. iv. pp. 577-581.

† "It is the competition of employers that, under the free working of natural law, gives to the marginal man the full amount of his product." Professor J. B. Clark, *Quarterly Journal of Economics*, vol. v. p. 309.

place (as, for instance, through the laborer's quickened intelligence, his higher skill, his greater carefulness in the use of tools and materials, his augmented energy due to the hope of larger returns) has been abundantly proved. In a word, what this alleged contradiction in terms, inconsistency, inversion of relationship, or however it may be characterized, amounts to is simply this: I hold that *the laborer's wages* are stipulated in advance, and, indeed, that this is of the very essence of wages. On the other hand, I hold that *the laborer's position* in the industrial order is such that, if he vigorously asserts his interests, he can continuously raise his stipulated wages to the full height of his increased efficiency in production.

(c) Another misapprehension which has appeared regarding the "residual" theory of wages relates to an assumed intention to exhibit this as a universal condition. It may be that this has been the fault of the author in not distinctly disavowing such an intention, which, indeed, never existed. The author at no time thought of applying such a rule to communities like China or India, or even to many of the more degraded laboring populations of Europe; and he deemed this sufficiently shown by his frequent assertions that the laboring class could only make good their claim to all the "residue" of the product through the exercise of the highest intelligence, energy, and acquisitiveness, and also and especially by refraining from doing themselves an injury through excessive reproduction, leading to over-population. (*Political Economy*, 1883, p. 268.)

It has been objected to the theory in question that, conceding the views presented regarding the source of rent and of profits, there is no more reason for attributing the character of a residual claimant to labor than to capital; and this is perfectly true, provided the laboring class are placed at a disadvantage, economically, by excess of numbers over the opportunities of employment, or by a

painfully slow increase of capital, due either to the severity of natural conditions or to social violence and disorder. In the latter case, it would be the capitalist, not the laborer, who would have "the upper hand on the stick." In fact, however, in all well-ordered communities, enjoying large natural resources, the accumulation of capital tends to outrun the increase of population; while the ability of capitalists (not of employers) to combine so as to prevent the rate of interest from falling, under the pressure of a rapidly increasing supply, is conspicuously less than the ability of laborers so to combine as to hold up the rate of wages. It was simply and solely on account of this general economic advantage in such communities that the mastery of the situation was attributed to the laboring class, who would thus be enabled, in the unceasing strain over the product of industry, to take up all the rope that might be paid out through any amelioration of the conditions of production. Does not the economic history of England and the United States during the past thirty or fifty years show that precisely this has been done?

II. In the April number of this *Journal*, Mr. Hobson, of London, presents his "Law of the Three Rents," the first effect of which he declares to be that "it completely destroys what may be termed the 'residuary legate' treatment of distribution" (p. 279). Mr. Hobson does not antagonize the view of the source of business profits presented in the April number of this *Journal* for 1887. On the contrary, he appears in a general way to accept it as valid.\* The way in which Mr. Hobson would

\* "It has been recognized that rent of land is not an element in the price of agricultural produce. So General Walker has proved that 'profits do not form a part of the price of manufactured products'; for, as he says, 'the profits are drawn from a body of wealth which is created by the exceptional abilities (or opportunities) of those employers who receive profits, measured from the level of those employers who receive no profits.'" *Quarterly Journal of Economics*, vol. v. p. 272.

"upset entirely the position of wages as a residual claimant" (p. 264) is by establishing the proposition that capital and wages are also subject to the law of rent, leaving thus all the claimants upon the product of industry equally subject to economic strain, the economic advantage or disadvantage of each in any given situation being determined purely by supply and demand. The significance of Mr. Hobson's contribution to the philosophy of distribution depends entirely upon his success in establishing this proposition. He calls his article "The Law of the Three Rents," and it is only as he shall prove that the returns to labor and to capital obey the same rule as the returns to land that the residual claimant theory will be affected.

Mr. Hobson's method is as follows. He assumes the existence of a body of laborers who, by their nature and industrial qualifications, are only enabled to exact a minimum wage, which, having reference to English conditions, he takes for illustration at 15 shillings a week. He then asserts the existence of bodies of superior labor, the compensation of which rises, grade on grade, from 15 shillings upward through a wide range. The minimum wage he declares to be, for all economic purposes, equivalent to the no-rent stage in land; and all above that line he holds to be "the rent of ability." In the same way, he assumes the existence of a body of capital which, by its nature and industrial adaptations, is only fitted to earn a minimum interest, which, again having reference to English conditions, he fixes at 3 per cent. per annum. He then asserts the existence of bodies of superior capital, the compensation of which rises, grade on grade, from 3 per cent. upward through a wide range. The minimum interest he declares to be, for all economic purposes, equivalent to the no-rent stage in land and to the 15-shilling stage in labor; and all above that line he holds to be "the rent of capital."

Now, if it were conceded that Mr. Hobson's exposition of the facts of industry in these respects is correct, what would it prove? The essential fact in regard to rent is that it does not enter into the cost of production.\* By Mr. Hobson's own view, the wages of labor, at least up to the 15-shilling limit, and the interest of capital, at least up to the 3-per-cent. limit, do enter into the cost of production. Here is all the difference in the world. Mr. Hobson, indeed, gives excellent reasons why a minimum wage and a minimum rate of interest *must* be paid, and thinks that these reasons, which are good enough to justify wages and interest, if they needed any justification, are sufficient to abolish the economic distinction between elements that do enter into the cost of production and elements that do not. He shows, what nobody disputes, that the land keeps itself, and that, therefore, the poorest land need not be paid for, while the poorest labor will not exist without a certain wage, or the least efficient body of capital without a certain rate of interest. But all this simply emphasizes the fact that interest and wages enter into the cost of production and rent does not. Giving good reasons why interest and wages must be paid does not change their relations to the cost of production,† which is the thing we are talking about.

But how about Mr. Hobson's exhibition of grade on grade of labor and grade on grade of capital, corresponding to grade on grade of soils?

What Mr. Hobson says about the rising wages of labor being due to rising productive efficiency is true enough, and would be appropriate to a discussion of Particular

\*Except, of course, monopoly rent, the influence of which upon price, whether the price of hops or of anything else, has always been conceded by the Ricardians.

† Professor Clark, as we shall see, in seeking to establish the proposition that the law of rent applies to wages and to interest, takes for his minimum labor so inefficient that it realizes no wages at all — i.e., is not worth employing — and capital so ineffective that it receives no interest.



Wages. I fail to see that it has anything to do with the question of General Wages, under which we inquire what part of the product of industry shall go to labor as a whole. The problem of Particular Wages — *e.g.*, the question why, when a common day laborer receives only 15 shillings (to adopt Mr. Hobson's minimum), a cotton-spinner receives 25 shillings and an iron puddler 45 — is a perfectly simple one. The principles are all open to view on the first glance. So simple is it that economists generally do not even give space to the discussion of the question. There is, in fact, little to be added to what Adam Smith said on the subject a hundred and fifteen years ago.

As to the assumption regarding bodies of capital having objective differences among themselves \* which create differing rates of remuneration, rising from, say, 3 per cent. upwards, one may well dissent. That different bodies of capital do, in fact, yield different rates of interest is too evident to require proof; but this is due to many causes which are irrespective of the nature of the capital itself. The foremost of these are the following:—

(a) *Differences in Risk.*—Much of what appears to be interest is nothing but insurance of the principal. For example, it was for a long time as easy to place capital at twelve per cent. in Iowa as at eight per cent. in Chicago or six per cent. in New York. These differences of interest were not due to objective differences in the bodies of capital so invested. The New York capitalist drew checks upon the same bank deposit in making these successive investments. Which part of his deposit would go to Chicago, which should go to Iowa, which should stay at home, he neither knew nor cared: that would depend on which check arrived first at the bank. Nay, with the amount which he retained for use in New York he might

\* Mr. Hobson speaks of pieces of capital as superior or inferior, of different pieces of capital as "graded in quality," etc.

put some into "governments" at five per cent., some into first-class mortgages at six, some into second-rate mortgages at eight, while "shaving notes" on the street at all the way from six to twenty. The bodies of capital so used were indistinguishable.

(b) *Miscalculation, on the one hand, or Fortunate Speculation, on the other.*—In buying commodities to be sold again or to be used in personal consumption, a wide range is given to the shrewdness of the purchaser and to the influence of fortune. So, where one buys stock with a view to securing a regular income from it or builds a mill for purposes of manufacture, miscalculation, on the one hand, or fortunate speculation, on the other, may enter to an enormous extent to create differences in the returns to investors, which do not arise at all from original differences in the bodies of capital engaged, but are due solely to the better or worse judgment with which the function of investment has been exercised or to the kindness or unkindness of fortune; possibly, also, to the effects of force or fraud.

In this matter, the usages of business men correspond to the view of the economist. If a manufacturing corporation has invested \$100,000 in a factory which, by reason of miscalculation or misadventure, proves to have the capacity of earning but \$8,000 a year net, the shares of that corporation sink to one-half their par value, so that, while the nominal capital on its books remains \$100,000, its capital as known to the market is but \$50,000; that is, the whole of it can be bought for that sum. If, on the other hand, by reason of exceptional natural advantages shrewdly taken advantage of or by superior management, another factory, near at hand, of the same size and capacity, built perhaps in the same year, with bricks drawn from the same yard, shows that it can earn \$12,000 a year net, the shares rise to \$200, and the real capital of the corporation becomes \$200,000; that is, its capital

stock will bring that sum in the market, and upon this amount this factory earns but 6 per cent., the same as the other.

We get an even clearer view of the case in contemplating those additions of capital which are required yearly to keep the two factories in good condition, or which may occasionally be called for to enlarge their capacity. The factory which is earning but 3 per cent. on the original investment is obliged to pay 6 for all the additional capital it obtains. The factory which is earning 12 per cent. on the original investment likewise borrows at 6. In regard to all that vast amount of fresh capital yearly available for investment, whether to keep up existing industrial and commercial enterprises or to extend them, or to create new ones in the same or in newly opened lines, the rule is that interest tends constantly and strongly to a uniform rate,\* except for differences caused by the differing risks of different kinds of investment, as estimated, rightly or wrongly, by the lender.

(c) *Disguised Rent, Disguised Profits, or Commercial "Good Will."*—The instances most relied on to show the wide range of interest generally contain some other element than interest, even after making allowance for the insurance of the principal, and even after admitting the effects of business miscalculation, on the one hand, and of fortunate speculation, on the other. Take the case of a factory placed forty years ago upon a New England river. At that time the possible mill-sites of the region were in small demand, and the corporation in question obtained its title to an inexhaustible water power and to an extensive tract of land along the bank, at a very low price. To-day the factory pays its owners double and treble dividends, which are largely rent, as would quickly be made

\* "In the industrial field as a whole there is a current rate of interest; and, by making now more of one thing and now more of another, society causes each to earn, in the long run, about the prevailing percentage." Professor J. B. Clark in the *Quarterly Journal of Economics*, vol. v. p. 232.

to appear if the corporation held its water power, its factory-site, and the land on which stands its village, by a lease about to expire. Even more interesting is the instance of the breweries mentioned by Mr. Bonar as declaring enormously high dividends. Here we have, in addition to the elements previously mentioned, the rent of springs or streams of water of a quality peculiarly adapted to making good beer; while commercial "good will," the reputation of the product arising from generations of use, enters to create almost fabulous gains. Disguised profits also enter into the dividends of many companies or corporations which have had the good fortune, good sense, and good feeling to retain, as managers, men of the highest business ability, born captains of industry, who yet, by considerate treatment and high salaries (the force of habit and perhaps pride in the works concurring), are induced to remain long after they have reached the pitch of reputation which would give them command of the situation if they chose to set up as manufacturers for themselves.

It might seem as though,—having expressed my reasons for holding, first, that, were Mr. Hobson's exposition of the facts of industry admitted to be correct, these would not justify the extension of the law of rent to wages and interest; and, secondly, that the exposition itself is erroneous, especially in regard to the allegation of objective differences among the bodies of capital applied to production, creating corresponding differences in the returns to these bodies of capital, respectively,—I need not further occupy the space of the *Journal* with comments upon Mr. Hobson's article. But there are certain things brought out incidentally to his argument, or introduced in illustration of his successive points, which seem to require a brief reference.

(1) Mr. Hobson does a grave injustice to the familiar economic argument by which it is established that the rent of land does not enter into the price of produce. He

represents the economist as showing that, if "a landlord" were to remit his rents, the tenant, or, if not he, then the miller or the baker, would be enriched thereby, while the price of wheat, or, if not of wheat, then of flour or of bread, would remain as high as before. He then assumes an agricultural laborer refusing wages, and shows that the price of the produce, *in the particular case* (p. 265), would be unaffected thereby, thus apparently putting land and labor in the same relation to the cost of production. But this is unfair; for, when the economist says "a landlord," in this connection, he means every landlord and all landlords. Were all landlords to remit rents, the price of produce would not be affected, and all the foreborne payments would go to enrich the tenants. But, if all agricultural laborers were to refuse wages, the cost of production would at once be reduced one-half, two-thirds, three-quarters, or nine-tenths, according to the state of the art of agriculture in the district concerned.

(2) Mr. Hobson asserts (with reference to my view of the source of business profits) that there are some businesses "which no employer will consent to carry on without a definite rate of remuneration as earnings of management" (p. 273). It would be interesting to hear which these businesses are; to learn what are the departments of industry in which many employers do not, first or last, fail; in which many others do not, after much labor and anxiety, have to be content with merely saving their capital; in which "a definite rate of remuneration" is secured to all who enter them. Especially should we here like to know if any one of these businesses has ever been set up in the United States. Is it banking, or hotel-keeping, or liquor-selling, or the grocery business, or tailoring, or the iron manufacture?

(3) In his closing paragraph (pp. 287, 288) Mr. Hobson charges those who present the "residual claimant" theory with catering to a popular passion for an easy,

cheap, simple, "rule-of-thumb" mode of accounting for the distribution of wealth. This charge might perhaps have been brought, with some show of reason, against that theory of distribution which ruled American and English political economy before the residual claimant theory was advanced,—the theory, namely, of the wages fund. There, indeed, distribution was made easy, and the matter of wages was reduced to a mere "sum" in long division. But the partition of the product of industry by the theory which Mr. Hobson attacks is no mere sum in division, no result of rule-of-thumb measurement, no play of clock-work. That theory recognizes the whole industrial body as continually in strain over the division of the product. It takes the fullest account of the moral and intellectual elements of supply and of demand. It puts each class that presents a claim to the product upon its mettle to make good that claim by strenuous, unfailing effort, declaring that whoever fails to pursue his interest must lose his interest. It reaches out to comprehend immense possibilities of good and evil by establishing the proposition, in bold defiance of the orthodox economy, that in industry there are gains which no man loses, as well as losses which no man gains. It introduces a dynamic element of the highest importance when it announces, as an economic law, that to him who hath shall be given, and from him that hath not shall be taken away even the little he seemeth to have.

(4) After so much that must seem ungracious criticism of Mr. Hobson's paper, I desire most heartily to express my sense of the value of his discussion (pp. 280-287) of the influence exerted upon distribution, in the case of an increase of production, by the comparative ease or difficulty of calling in additional quantities of one or another or of all of the several factors of production.

III. In the same number of the *Journal* which contains Mr. Hobson's article on "The Law of the Three

Rents" appears a paper on "Distribution as determined by a Law of Rent," from the pen of Professor J. B. Clark, of Smith College, on which my present purpose requires me to comment. Inasmuch as I shall have to dissent widely from the views of this most scholarly, candid, and laborious economist, I desire to say here that there is much in the article which is of high value,—much, especially, bearing upon the questions of production and consumption (according to the old divisions of political economy) which needs to be said, and could not be better said than it has been by Professor Clark. Yet, as to the law of distribution laid down, I must take exception.

In his note on these two articles, the editor of the *Journal* speaks of them as reaching "substantial identity of conclusion." Is not this a mistake? Is not an impression to this effect—natural enough on first scanning the two articles—due to the common use of certain terms, which, however, the two writers use in widely different senses? Mr. Hobson, indeed, speaks of the law of rent as applying to labor and to capital as well as to land; and so does Professor Clark. But the former by wages means payments above the minimum received by common day labor (say 15 shillings a week), and by interest payments above the minimum rate, say 3 per cent. per annum. On the other hand, Professor Clark seeks to extend the law of rent to all employed labor and to all capital in use. He does, indeed (pp. 314, 315), refer to differences in the productive power of laborers and in the productive efficiency of different bodies of capital; but it is only after he has fully reached "the law which fixes the rate of wages and the aggregate amount of interest" (p. 311). Those differences are not at all of the essence of his theory, while Mr. Hobson's whole theory is built upon them. Indeed, Professor Clark, throughout his discussion of capital, asserts its strong tendency towards a uniform rate of interest. All which he urges for the iden-

tification of wages and interest with rent would hold good, were all laborers uniformly efficient, and were all separate bodies of capital intrinsically of equal productive force. Under such a condition, Mr. Hobson's argument would be entirely without significance.

Professor Clark's method of proving that "interest as a whole is rent, and even wages as a whole are so," both of these incomes being "differential gains," and both being "gauged in amount by the Ricardian formula" (p. 289), is to assume "a fixed fund of pure social capital" ("invested partly in land and partly in made instruments") and to consider the application thereto of an increasing labor force (pp. 304-311); secondly, to assume a labor force fixed in amount and to view the effects of increasing the fund of capital which it uses (p. 311). In the former case, he finds that "the pure capital is like the field [that is, like any field], in that it is subject to a law of diminishing returns. A few men using a large fund create a large product per man: new men joining the force add less to the output, and the last man who comes adds least of all. Each earlier worker creates a surplus over and above the amount created by the last one, and the sum of all these surpluses is the rent of the fund" (p. 305). In the second case, "it is the successive increments of capital that are now subject to the law of diminishing returns. . . . Of a succession of units of pure capital brought into use in connection with a fixed labor force, each one adds less to the output of industry than does any of its predecessors. . . . All the earlier units [now] create surpluses over and above the standard set by the product of the final unit, and the sum total of these surpluses is the rent of the labor force. It is the aggregate of the differential gains resulting from the application, in connection with the fixed labor force, of the earlier increments of capital" (pp. 311, 312).

(1) Can we concede the correctness of Professor Clark's



view of the processes of industry? Can we admit the legitimacy of his method of demonstration?

(a) In the first place, Professor Clark seems to be in error in assuming that the principle of diminishing returns begins to operate from the very start in the movement towards increasing production. Thus he says: "Put one man only on a square mile of prairie,\* and he will get a rich return. Two laborers on the same ground will get less per man; and, if you enlarge the force to ten, the last man will perhaps get wages only" (p. 304). Can there be any doubt that here is at least a technical mistake? Will not two men upon a square mile of good land produce more than twice as much as one man, owing to the opportunities for combination and to the virtue of the division of labor? Will not four men produce more than twice as much as two, owing to the further extension of these principles? Up to ten men to the square mile, and possibly even beyond this limit, will not an increase in the cultivating force steadily enhance, not merely the total product, but the product per man?

It may be said that this is merely a technical error; that, had Professor Clark taken for his unit, *e.g.*, a "quarter section," or eighty or sixty acres, his description of the effects of increasing the amount of labor engaged upon the land would hold good. But is there in this matter merely a technical mistake? To assume a smaller unit of land would, indeed, avoid the contradiction to Professor Clark's theory found in the fact that *returns do not diminish* prior to such an occupation of the soil as gives each man a body of land just large enough for him to cultivate; but how, upon Professor Clark's theory, can we explain the fact that, up to that point, *the per capita returns actually increase*? That theory, so far as I can see, does not recognize the stage of increasing returns at all; yet that

\*Mr. Hobson uses this word in a sense not familiar to us. He says, "Land below the margin of employment is waste or prairie" (p. 267).

stage is as real as the subsequent stage of diminishing returns. Throughout most of the agricultural history of our own country it is the former, and not the latter, force which we have seen in action.

(b) But, disregarding the earlier stages of the progress towards absolutely enlarged production, in which, it would appear, no one can question that there is a period of increasing per capita returns, how about the correctness of the view that capital and labor are, in their general course, subject to a law of diminishing returns? Professor Clark deems this proved by his illustration of the application, first, of an increasing body of capital to a fixed labor force; and, afterwards, of an increasing body of labor to a fixed fund of capital. But is this method of demonstration legitimate? It is, of course, easy to show that two men with one spade cannot cultivate twice as much land as one man with one spade; that three men with the same spade will cultivate far less than three times as much land as one; and that, when the fourth, the fifth, and the sixth man are successively brought in to use that much wronged implement, the product per man will be about that of the average city laborer on the streets. But why not let each man have a spade to himself, and then inquire whether the per capita product diminishes as the number of laborers increases? In discussing rent, it is true, we assume a fixed quantity of land, for the good reason that the quantity of land is fixed by nature, and cannot be increased; while, in most countries, population has actually pressed upon the means of subsistence sufficiently to require cultivation to descend to lower grades of soil, often to very low grades of soil indeed. But, aside from the limit imposed upon human expansion by the chemical capabilities of the soil, there is no reason why capital should not go on increasing indefinitely.

If, then, we are inquiring into the forces which distribute the product of industry, why should we not assume

an increase of capital corresponding to any increase of labor which we may take for the purposes of discussion? In all well-ordered communities, enjoying natural conditions which are reasonably favorable, capital actually does increase as fast as this. If it be so, why should we not hope to discover a great deal more of the truth of the matter by assigning to each laborer a spade, an axe, a hammer, a loom, or a fishing-rod, according to his avocation, and then ask whether, aside from the effects of diminishing returns in agriculture, due to the chemical limitations of the soil, an increase of labor (properly distributed over all the avocations\* practised in the community) will result in a diminishing or in a stationary or in an increasing per capita product?

Now, if it be true that capital and labor increasing together and in due proportion do strongly tend towards an increasing return to each unit of labor and capital employed in production, what must we think of the method of demonstration by which it is made to appear concerning each of those, separately, that, as it increases in amount, it does by its very nature come under a law of diminishing returns? How can it be that two forces, each of which, by the very nature of things, acts, as it progresses, at a diminishing rate, shall yet, by being compounded, produce results which not only do not diminish, but actually increase from term to term?

On the point of the tendency of capital and labor, when increasing together, in due proportion,—as, in the natural

\* Here is seen the fallacy of Mr. Hobson's illustration (p. 270) of a shopkeeper whose business has profitably employed two men, but who might have to take on a third man at a comparative disadvantage. Very well. But suppose an increase throughout the community of labor and capital to the extent of fifty per cent.,—three to two,—all other shops and all factories and farms and other industries sharing in the expansion, might not the shopkeeper in question find his business so enlarged as to make the services of the third man not less profitable to him than the services of either of his predecessors? And would not a shop employing three men under a competent master be better organized and relatively more efficient than a shop with two assistants only?

course of things, they do,—to produce continually larger and larger bodies of wealth, I entertain the strongest conviction, which nothing in these two papers has in any degree shaken. To that progress, I believe, *nothing in the nature of these agents themselves sets any limits*. Mr. Henry George seems to me perfectly in the right in strongly insisting that, aside from the effects of driving cultivation down to inferior soils, increase of labor does, through the differentiation of functions, the localization of industry, the opportunities offered for the use of specialized tools and machines, and the naturally resulting increase of capital, bring increase of productive power.

I cannot regard the illustration offered by Mr. Hobson of the diminished fruitfulness of the work of a single laborer, protracted beyond certain limits which are fixed by his physiological aptitudes, as having the slightest effect to prove the proposition that "labor" is necessarily subject to a law of diminishing returns. It cannot be said that "labor" meets a diminishing return unless it is true that a larger amount of labor *performed by a corresponding number of laborers* is subject to that condition.

It seems to me that what has defeated Professor Clark's effort to reach a new law of distribution in the article under consideration is his uniting under a single title things which are essentially different, not only in popular estimation, but in their very nature. He starts out by declaring that wages and interest together constitute the entire product of industry.\* In order to achieve such "fierce abridgment" of the problem of distribution, he is obliged to group together both land and "made instruments" of production, the former of which is naturally limited in amount and quality, while the latter are susceptible of practically illimitable multiplication and diver-

\*Except that which he terms "pure profit"; i.e., the product of unbalanced industrial forces, which come into existence and continue in existence "only while society is changing" (p. 289).

sification. In the same way, he includes in "labor" both the services of the employed and the services of the employer, and in "wages" the reward of both those classes of services indiscriminately. Now, if the view of the "Origin of Business Profits," presented in this *Journal* for October, 1887, contains any degree of economic truth, we have in Professor Clark's labor and wages two classes of services having different industrial natures and two kinds of remuneration subject to different laws. The amount of effective business ability is not, indeed, like the amount of land, fixed by nature for all time; but at any given time, in any given community, not only is it then and there determined in amount, but that amount is distinctly below the industrial needs of that community, if raised far above the savage state. Consequently, the fortunate possessors of that power of organizing and conducting with success considerable business enterprises, whether in agriculture, in manufacture, in commerce, or in transportation, are able to reap for themselves gains which popular usage denominates profits,—gains too large to be treated by the economist as not worthy of separate account; gains so large as to constitute the real *gravamen* of the discontent and anger of the working classes; gains which are not of the same nature as wages, and which cannot, without loss at once of public interest and scientific accuracy, be merged in the mass of wages.

Dropping now all further allusions to business profits, let me say that the perusal of the articles of Mr. Hobson and Professor Clark has only strengthened my conviction that the doctrine of rent, the old-fashioned doctrine of the rent of land, is the corner-stone of the theory of distribution. Therefore, the extension of the term "rent" to include wages and interest, and its use in such connections as "consumer's rent" and "producer's subjective rent," seem to me only calculated to confuse the public mind and to lessen the popular interest in political economy.

FRANCIS A. WALKER.

## A CONTRIBUTION TO THE THEORY OF RAILWAY RATES.

IN the volume supplementary to his history of English railway experience, Professor Cohn has put forth an explanation of railway rates which has won wide acceptance, and which deserves, both for its ingenuity and for the deservedly high reputation of the author, a more careful examination than it seems yet to have received.\* Briefly, the theory is that railway charges are fundamentally like taxes. All experience shows that railway rates are based, not on the cost of furnishing the service, but on what the purchasers can afford to pay. As with taxes, the fundamental principle is that of *Leistungsfähigkeit*: the charge based on what the purchaser can afford to pay, and ought to pay. The problem, therefore, is at bottom one of ethics, involving those considerations of public policy and of right and wrong which recur in the discussions of proportional or progressive taxation. The need of considering the means and the purchasing power of the passengers and shippers forces itself on every railway manager, whether he will or no; and it supplies a striking illustration of the indestructible link between ethics and economics.

To illustrate by particulars. Cohn explains that the higher rates for first-class than for third-class passengers are not due to the more expensive accommodations of the former,—and here he is right beyond doubt, for the difference in expense would account for only an insignificant part of the greater charge,—but to the fact that their

\*G. Cohn, *Die englische Eisenbahnpolitik der letzten zehn Jahre*. Leipzig, 1883. pp. 65-84.

means are larger. They can afford to pay more; railway managers feel that in justice they ought to pay more; and they are charged higher fares. Cohn makes no detailed application of this ethical point of view to freight rates, and his tentative style leaves it somewhat uncertain how far he would carry the principle. Indeed, there is an obvious difficulty here. It is true that freight charges are usually lower on cheap goods than on dear goods; but how are we to know that cheap goods—say, coal and ores—serve for the consumption of the poor? Cohn, however, expresses more than once his conviction that the fundamental question is the same,—one of justice and *Leistungsfähigkeit*. He cites, as a clear illustration, a provision of the German Constitution by which railroads are obliged, in times of scarcity, to carry food at low rates. Again, he notes that in regard to ordinary freight the means of the ultimate consumer are not easily ascertained: therefore, we have, in freight rates, only a rough and uncertain adaptation of the charge to his means, analogous to those common and unavoidable devices in taxation, by which we resort to some rough and more or less uncertain indication of the tax-payer's means. It suffices for his general conclusions that the adjustment of passenger fares on the basis of the means of the passengers, and of freight rates according to what the goods will bear, have something in common. Both sets of discriminations have an ethical basis: they rest on a sense of justice which the railway manager cannot put aside.

The conclusion finally deduced from this train of reasoning is that public ownership of railways, or at least public regulation of rates, is imperative. In every case where we find the price of a set of services inevitably settled on grounds of right and wrong, no private person or corporation can be safely intrusted with their administration. So delicate a process, involving necessarily an interference in distribution of a more or less arbitrary sort, must be in the hands of the State.

I have referred at some length to the speculations of the distinguished professor at Göttingen, because they are significant of a general trend of opinion among writers on railway topics, that the principles which apply to the ordinary phenomena of exchange do not help us in explaining the returns which a railway gets for its services. Sometimes this rejection of the general theory of value is stated in so many words. Sometimes it is rather implied, in statements that railway rates are governed, not by cost of service, but by value of service; by what the traffic will bear; by cost to some extent and by other things to a greater extent. The object of the present paper is to examine some of the characteristics of railway rates, and more especially to enter on the inquiry suggested by Professor Cohn's speculations, whether railway rates must really be explained on separate and peculiar grounds.

The central point in such an inquiry is the bearing of cost of service on railway rates. We may begin, therefore, with some consideration of the nature of a railway's expenses. Analyzing these, the most striking peculiarity is the great proportion of the total which falls to return on capital sunk. The investment of fixed capital is very large, not only in itself, but in comparison to the business done. There is a tradition in England that the turn-over of a railway — that is, its gross receipts — must be at least ten per cent. of the capital invested, in order to make the enterprise profitable; and in recent years the English roads have certainly not exceeded that proportion. Where the plant is less elaborate than in England, the gross receipts form a larger percentage of the investment. The roads of the State of Massachusetts have received in recent years in gross over twenty per cent. on the investment. But even at twenty per cent. the proportion of turn-over to capital is, in comparison with other industries, extraordinarily small. The consequence is that a very large proportion of the gross receipts must be devoted to the payment of a



return on capital at the usual rate. Return to capital thus forms by far the largest single item in the expenses of a railway. Operating expenses usually absorb from fifty to sixty per cent. of the gross receipts, leaving from forty to fifty per cent. for payments to capital. In the language of every-day life, we do not ordinarily speak of the whole of these payments as expenses: only the so-called "fixed charges" come under that head. But, for the purposes of economic theory, dividends enter into expenses as much as interest on debt, in so far as the dividends yield only that return which in the long run is necessary to induce the investment of capital. If the profits on investments in railways have not proved unusually high, and if dividends and interest combined have not formed an exceptionally large return on the capital sunk, we may say that the entire payments to capital form part of the expenses necessary for yielding the railway service. The evidence is strong that railways have not been, at least in England and the United States, on the whole exceptionally profitable. Certainly, they have not yielded returns to the investors so much above those got in other directions that there is any substantial inaccuracy in the statement that the forty or fifty per cent. of gross receipts which goes to interest and dividends is part of their necessary expenses. So much must be paid in the long run if railroads are to be built by private individuals, or by governments with capital borrowed from private individuals.

But this, the largest item in a railway's outgo, has no influence on railway rates: so much is admitted by all careful writers, and by all railway managers. The grounds of the conclusion are not always stated in the same way. Very often it is said that the investment in a railway plant is irrevocable; the railway is there, and cannot be moved or turned to other use; it will continue to be run so long as it yields anything over operating

expenses, whether or not the excess brings the usual return to the capital invested; this return, or the need of getting it, consequently does not affect rates. The reasoning holds good for a given road or group of roads at any particular time. But, looking at railroad operations as a whole, it hardly gives a sufficient basis for the sweeping proposition that railway services are rendered quite without regard to profit on capital. In the long run, even after admitting everything that may be said of speculative building and indirect profits of projectors, railroads will not be built and run unless the capital sunk in them gets something like the return it may expect in other directions. A road once built may be maintained and operated, even though it yields little or nothing on the capital sunk in it; but new roads will not be built or old ones extended under such conditions. Where we find the railway net steadily enlarging, new roads being built, and old ones adding branches, new tracks, and extensions, we may infer that the capital put into them expects to find and in the long run does find its account, and that rates are adjusted so as to yield to capital at least its ordinary return. Looking at the general range of rates as they develop in the long run, we cannot conclude, therefore, that return to capital may be dropped from the list of factors determining them.

But looking at any particular rate, at the charge on this or that item of traffic, we can reach the conclusion unreservedly; and this is the sense, to my mind, in which it is true and important that return to capital is not a factor in determining rates. As to any particular item of traffic, the only question is whether it pays more than the cost of moving it. If it does, the traffic is advantageous to the railway, even though the excess over operating expenses is so small that, if the same proportion held on all traffic, very little would be earned towards interest and dividends. It is a commonplace in the discussions of rail-

way rates that different sorts of traffic contribute in very different degrees towards paying fixed charges and dividends. Some classes of traffic, of the sort that can be got only if the rates are low, contribute little: others, of the sort that will come even though rates be high, contribute much. In the rates on one article of freight as compared with those on another, or in passenger fares as compared with freight charges, the item of return to capital is indifferent. Even though the traffic as a whole is mulcted enough to yield this return, the rate on any individual part is settled without regard to it.

Looking at the matter broadly, we have here commodities produced, in part at least, at joint cost. For the explanation of the values of commodities produced under such conditions, the classic economists developed a theory which they applied chiefly to cases like wool and mutton, gas and coke, where practically the whole of the cost was incurred jointly for several commodities. But obviously it also applies, *pro tanto*, to cases where only part of the cost is joint. The conditions for its application exist in any industry in which there is a large plant, turning out, not one homogeneous commodity, but several commodities, subject to demand from different quarters with different degrees of intensity. Under such circumstances, while part of the cost is incurred separately for the individual commodities, a part is incurred jointly for all of them. The nature of the demand, then, has a permanent effect on their values. No one commodity, of course, will be sold for less than the separate cost incurred in regard to it. Wool will not be sold for less than the cost of shearing, nor mutton for less than the cost of dressing; and in railroad operations no traffic will be carried for less than the separate cost of moving it. We may assume, for convenience in the present stage of the reasoning, that the several commodities in any one group — the several railway services in the group now under consideration — will

be sold at prices which will make up a total sufficient to yield ordinary returns on the capital embarked. There will remain then a gap between the prices which must be charged to get back the items of separate cost on each commodity, and the total price which must be charged to get a return on the whole outlay; this gap representing the elements of cost jointly incurred. To this joint cost, each commodity or service will contribute in proportion to the demand for it. It will contribute more and sell proportionately high if the demand does not need to be tempted by low prices, and will contribute less and sell proportionately low if a high price tends to choke off the demand. The familiar reasoning need not be further restated: we are concerned here not so much with the theory as with its application to the case in hand.\* The labor which built the railway—or, to put the same thing in other words, the capital which is sunk in it—serves equally to aid in carrying on every item of traffic, and represents joint cost for the whole of it. The traffic, on the other hand, is of very various sorts, subject to demand from different quarters with varying degrees of intensity. It is, therefore, in accord with what we might expect from general theory that the different sorts of traffic contribute in very different proportions towards paying the fixed charges, or the return to capital,—the element in railway operations which represents joint cost. Traffic which will continue to come even at comparatively high rates will continue to be taxed high, and will contribute largely towards fixed charges. Traffic for which the demand is sensitive to price, and which can be got only at low rates, will contribute little.

The most complete illustration of a plant which serves to yield various services at joint cost is in a canal or common highway. Here the operating expenses are insignifi-

\*The best statement of the general reasoning is in Mill's *Principles of Political Economy*, Book III. xvi. § 1.

cant, and interest on capital is almost the only current expense. We need not therefore be surprised to find that the canal and turnpike tolls of former days were not uniform, but varied with the character of the traffic. Canal tolls, like railway charges in our own day, were lower on the bulky goods, which would be offered for transportation only if rates were low, and higher on "merchandise" of greater value, which could bear a higher charge, and which railways had not yet diverted from the canals. Similarly, turnpike tolls, as Adam Smith tells us, were higher on carriages of luxury than on wagoners' carts.\*

This application of the theory of joint cost has been explained at what may seem to be tedious length, because I believe that the same principle can be applied much more widely, and can be made helpful for the understanding of the bearing on rates of all the items of railway cost. Not only the fixed capital of a railway, but a very large part, in fact much the largest part, of the operating expenses, represents outlay not separate for each item of traffic, but common to the whole of it or to great groups of it. Operating expenses also form joint cost, and necessitate an accommodation of rates to demand rather than to specific cost. To the further consideration of this extension of the theory I now proceed, resuming for that purpose the analysis of the expenses of a railway undertaking.

The operating expenses of a railway are usually divided, in the best arranged reports concerning English and American roads, into five parts: (1) maintenance of way; (2) motive power; (3) maintenance of car equipment;

\*See the foot-note to page 461. Examples of classified tolls on canals may be found in Ringwalt's *Development of Transportation Systems in the United States*, p. 47, and in Chevalier's *Voies de Communication aux États-Unis*, vol. i. p. 255. Compare Cohn's *Englische Eisenbahnpolitik*, vol. i. p. 15; vol. ii. p. 475. In Sax's *Verkehrsmittel*, vol. i. pp. 57-61, attention is called to the large proportion of plant in all transportation agencies, and to the element of joint cost in them. Here, as elsewhere in Sax's discussion, the principle of joint cost is rather implied than explicitly worked out.

(4) conducting transportation; (5) general expenses and taxes. In the appended note, the proportions borne by these items are given for some English and American railways.\* It will be seen that by far the largest items are for motive power and for conducting transportation, each of which accounts for between twenty-five and thirty per cent. of the operating expenses. Next comes the item of maintenance of way; then, general expenses and taxes; last, maintenance of cars, which indeed is often classed, with good reason, among the expenses of conducting transportation.

But it is obvious that this analysis, interesting as it may be in showing the directions which a railway's outgo takes, helps little for the particular inquiry now in hand. It helps little in determining how far the operating expenses are jointly incurred for all the traffic or for great groups of it, and how far they are incurred separately for separate items of the traffic. Some items, to be sure, are obviously in the nature of joint cost. Practically, all of what goes for maintenance of way is of that sort. The wear and tear of road-bed, bridges, track, fences, is chiefly the result of the disintegrating forces of nature, and goes on whether there be much traffic, little, or none at all. Such an item as the wearing away of rails is indeed partly

\* The figures given below are taken from the reports of the Union Pacific Railway and the Pennsylvania Railway (main line) for 1889, and of the London and Northwestern Railway for 1890. The figures state the percentage which the various classes of expenses bear to the total operating expenses. The classification of individual items is not the same for the three, though there is little difference between the Union Pacific and the Pennsylvania, except as to taxes. Between the English railway and the two American roads there are more important differences. But the figures are on a sufficiently uniform basis to serve for illustration of what is said in the text.

|                                | Penn. R.R. | U. P. R.R. | L. & N. W. |
|--------------------------------|------------|------------|------------|
| Maintenance of way, . . . .    | 18.6%      | 18.1%      | 17.6%      |
| Motive power, . . . . .        | 26.6       | 33.1       | 26.2       |
| Maintenance of cars, . . . .   | 15.0       | 9.5        | 7.1        |
| Conducting transportation, . . | 36.7       | 30.0       | 36.9       |
| General expenses, . . . . .    | 3.1*       | 9.0†       | 12.0†      |

\* Not including taxes.

† Including taxes.

the direct effect of the traffic; but it is impossible to apportion it in any measurable way to the particular items of traffic. For practical purposes, this item, like other expenditures for maintenance of way, is joint cost incurred for the traffic as a whole. The same holds good of the last set of expenditures, the general expenses for administration, insurance, legal expenses, and taxes (which, for the present purposes, we may consider to be "cost" as much as any other part of the railway's outgo). They are independent of the volume of traffic, and may be classed as joint cost. These two items — maintenance of way and general expenses — alone form about one-third of the total operating expenses. But, looking at the items which make up the other two-thirds, we find a great mass of expenditures similarly incurred for the traffic as a whole. Under the head of conducting transportation, or, in the English phrase, traffic charges, we have the expenses for switchmen and yardmen, telegraph expenses, many station expenses: practically all of them serving for the traffic as a whole. Under the head of motive power we have a large item for repairs of locomotives, and under that of maintenance of cars a similar large item for repairs of cars; both of them, it is obvious, due chiefly to wear and tear from the traffic as a whole, and not assignable to any particular part of it.

Professor Sax, in the chapter of his treatise on railways which discusses rates, has approached the problem from a point of view very close to that suggested in this paper, and has endeavored to ascertain how great a proportion of the expenses of a railway is independent of the volume of traffic. He distinguishes the "general" and the "special" costs; the former being of the expenses which must be incurred if the railway is to be operated at all, the latter those which depend more or less on the volume of traffic. He reaches, in the rough, the surprising result that the items of "general" cost constitute one-half of the



operating expenses. But operating expenses themselves are only one-half of a railway's outgo: the other half consists of return for capital sunk. Looking, therefore, at the whole of a railway's expenses, Sax concludes that three-quarters are independent of the items of the traffic. In other words, by far the largest part of the cost of performing railway service is joint cost.\*

But this by no means states the full extent to which the principle applies. Sax includes among "special" costs every expense which is affected at all by the volume of the traffic. A large proportion of these more flexible expenses are not of a sort which can be split up and charged to any particular items or groups of traffic: they vary only with the volume of business as a whole, and not even in any fixed proportion as to that. Thus among Sax's "special" costs are included switching and signalling expenses, all station expenses, water supply, telegraph expenses, payments for damages, renewal and repair of rails. No doubt such expenses expand and shrink in some degree as the volume of traffic is greater or smaller; and, therefore, they may fairly be classed as of a less "general" sort than those for maintenance of way and return to capital, which must be incurred in order that there shall be any traffic at all. Yet, clearly, they cannot be apportioned to the different parts of the traffic. Switching and signalling expenses, for instance, tend to increase as traffic grows; yet it is impossible to say that any given train or any given branch of the traffic entails any specific part of the expense. So as to renewal and repair of rails. Heavier and more frequent traffic pounds the rails to pieces somewhat more quickly; but it is practically im-

\* E. Sax, *Die Eisenbahnen*, Part 3, B, chap. ii. Practically the same proportion is pointed at by Kirkman (*Railway Accounts*, vol. i. p. 305), when he states that about three-fifths of operating expenses are incurred jointly for passengers and freight. It may fairly be inferred that most of the expenditures not assignable to one or the other of these great divisions are indispensable for conducting the traffic at all.



possible to say how much expense of the sort one train or a dozen trains entail. Figures are, indeed, sometimes given as to the average expense per train-mile for renewal and repair of rails. But, in calculating them, it is assumed, for example, that the greater speed of passenger trains offsets the greater weight of freight trains, and that a train-mile of either class can therefore be debited with the same share of this expense. The averages are purely fictitious. In fact, these expenses serve for carrying on the traffic as a whole: they cannot be charged to one part more than another. They may be classed, for all practical purposes, with those inflexible items which we have already found to constitute by far the larger portion of a railway's outgo. They swell still more the list of items of joint cost.

Even so, however, we have not stated fully the extent to which this peculiarity runs through a railway's operations. There are certain groups of traffic which entail separate and specific expenses for them alone; but there is again a large element of joint cost for the various services included within each group. The great groups are passenger and freight traffic. To each of these separately are chargeable certain expenses which, while not a large proportion of the railway's total outgo, are yet considerable in themselves. To freight service alone must be charged, for instance, wages of freight train-men and engineers, fuel, repairs of freight cars and locomotives, loss and damage on freight, station expenses incurred solely for freight. If there were no freight traffic, these expenses would cease; and, if a particular train were taken off, so much expenditure for wages and fuel would cease. But, obviously, for the particular train there is a large element of joint cost. A train of thirty cars may contain an assortment of various kinds of freight, coal and lumber, silks and sugar, for all of which there is one joint cost of train-movement. Further, for at least a large part of the

freight expenses as a whole, the same principle can be applied. A good share of the station expenses and of expense for repairs of equipment is incurred for the traffic as a whole, and cannot be split up among the separate trains and tons that go to make it up. So in regard to passenger traffic. Most of the station expenses and of the expenses for repairs of cars and locomotives are incurred for the passenger traffic as a whole. Others are partially separable. Suburban traffic and local traffic entail certain expenses of their own, and every train causes so much outgo for wages and fuel. But for the suburban traffic as a whole, again, many expenses are joint; and for any one train, which may contain through and local passengers, commuters and casuals, practically the entire expense is joint.

Attempts have indeed been made at various times, both by railway managers and by writers on railway topics, to apportion the expenses, and assign to each item of traffic the sums which it costs. Thus it is a common practice to assign the expenditures for maintenance of way to passengers and freight, respectively, in proportion to the train-mileage. The Interstate Commerce Commission has instructed the railroads of the United States, in their reports to it, to make an apportionment on this basis of their expenses for maintenance of way, and indeed for all items not separately chargeable to the one service or the other. Yet, surely, the division is purely arbitrary. These items of cost, in fact, are jointly incurred for both sorts of traffic; and I cannot share the hope entertained by the statistician of the Commission, Professor Henry C. Adams, that we shall ever reach a mode of apportionment that will lead to trustworthy results.\*

\*See the first annual report on the *Statistics of Railways in the United States*, 1888, p. 19. In the days before the Interstate Commerce Act was passed the practice varied. Thus the Pennsylvania assigned one-third of the joint expenses to passenger, two-thirds to freight; the Erie, two-fifths to passengers,

Again, Mr. Albert Fink has constructed an elaborate formula for ascertaining the cost of carrying freight per ton per mile. By this the cost of each of the great divisions of railway expenditures — maintenance of way, interest, station expenses, movement expenses — is separately calculated per ton-mile. The cost of maintenance of way per ton-mile, for example, is reached by assigning to freight traffic that proportion of maintenance expense which freight train-mileage bears to total train-mileage, and then dividing by the number of ton-miles of freight moved. Other items are similarly split up, and thus we get a final figure of "cost" per ton-mile,— which represents no real thing whatsoever. No one knows better than its able and ingenious author that it does not in the least show that each ton costs so many cents to carry, in the sense that, if the ton were not there, so much expense would disappear. Such calculations have their uses. Their results for successive years help to make more clear and specific the general tendency towards reduction in railway cost and rates. But the attempt to split up a railway's expenses in this way obscures the real nature of its operations; and, as a basis for fixing or criticising railway rates, the averages are useless and indifferent alike for the railway manager and for the student of economics.\*

three-fifths to freight. Kirkman, *Railway Accounts*, vol. i. p. 314. In all cases the division is purely arbitrary, and, it is safe to say, is never thought of by any railway manager when considering at what rates he can afford to carry passengers or freight.

\* Mr. Fink's formula is given in Ringwalt's *Transportation Systems*, p. 259. Compare the interesting analysis of the expenses of the Louisville & Nashville Railroad in his *Cost of Railroad Transportation* (Louisville, 1875), where an endeavor is made to figure out the operating expenses per ton-mile and passenger-mile. A similar careful endeavor is made for the Illinois Central in Mr. L. P. Morehouse's *Concerning the Cost of Transportation by Railroads* (New York, *The Railroad Gazette*, 1874). Mr. Morehouse goes so far as to divide the expense for maintenance of way into two parts, direct and indirect, the direct being those "due to the actual transportation" and the indirect those

The impossibility of reaching helpful results by investigating the specific cost of any item of railway service is nowhere better illustrated than in the curious assumptions of some European writers, who have tried to ascertain whether the fares for first-class and third-class passengers are justly apportioned to the costs of carrying the two classes respectively. In one such investigation, it was assumed at the start that a first-class passenger cost twice as much as a third-class passenger; then that a passenger car cost twice as much to move as a freight car; and, finally, that the difference in cost for different classes of freight and passengers corresponded to the differences in rates on them,—a veritable putting of the cart before the horse.\* In another case, an English writer,† who wished similarly to ascertain the ratio of working expenses to gross receipts for first-class and third-class passengers respectively, began by apportioning the working expense to the different classes in proportion to the number of carriages of each class. But obviously, so long as the different carriages are always run together on the trains, this is a pure fiction. The case, in fact, is one typical of the impossibility of apportioning railway expenses. The

"due to the general operation of the road." His figures result in the following division of the maintenance expenses:—

|  | Direct.       | Indirect.   |
|--|---------------|-------------|
| Renewal of rails, . . . . .            | 25 per cent.  | — per cent. |
| Joints, spikes, frogs, switches, . . . | 7             | —           |
| Ties, . . . . .                        | 6             | 6           |
| Labor on track, watchmen, . . . .      | 21            | 21          |
| Repairs and watching of bridges, . .   | 4             | 8           |
| Other items, . . . . .                 | 1             | 1           |
|  | 64            | 36          |
|  | 100 per cent. |             |

I cannot help suspecting that this apportionment between the direct and indirect expenses rests largely on guesswork; and I doubt greatly whether in practice the so-called direct share affects rates more than the indirect.

\* The calculation is quoted in Schreiber, *Tarifwesen der Eisenbahnen*, p. 50.

† Quoted in Jeans's *Railway Problems*, p. 265.

items which are separable—such as the more expensive fitting of the first-class carriages—are insignificant. Wages of train-men and engineer, the only considerable remnant of expenses which can under any circumstances be separated from “general” costs, are here incurred for all three classes of passengers together. It would be difficult to find a more complete illustration of the application of the principle of joint cost.\*

We may sum up the result of the preceding discussion as follows. The greater part of railway expenses is entirely independent of the traffic: it must be incurred in order to do any business at all. Of the remaining smaller part of the expenses, a large proportion consists of items which vary with the volume of the traffic as a whole. The rest contains items which, while confined to certain great groups, are yet incurred jointly for the traffic within each group. When we look at any particular carload or ton of freight, any particular passenger or group of passengers, we can find hardly an item of expense which is not incurred jointly for the entire traffic or for some large group of it. Meanwhile, as has already been noted, and as indeed is obvious, the services or commodities produced are not homogeneous: they are of very various sorts, and subject to demand from different quarters and with different degrees of intensiveness. Railways present on an enormous scale a case of the production at joint cost of different commodities.

The application of this conclusion is obvious. As with

\*The scope for the operation of the principle of joint cost evidently is wider as a railway's traffic is more varied. It applies most widely to a great trunk line, whose traffic is in great volume and of heterogeneous character. On some of our Western roads, where one item—the through carriage of agricultural produce—forms a very large part of the total traffic, there is less play for its application. A road like the Reading, whose coal traffic is (or was) of preponderating importance, must get back from the coal tonnage some considerable contribution towards meeting the joint expenses. If a railway carried one commodity only, say coal, between two terminal points only, there would be no case at all for the principle.

all commodities produced at joint cost, demand has a permanent effect on values or prices (for the purposes of this investigation the terms may be used indiscriminately). We may continue to assume, as we did in discussing the mode in which return to capital affects railway rates, the conditions of free competition: that the total receipts of a railway will no more than repay the expenses,—return to capital being included among the expenses. Total receipts will then equal total cost. But that cost will be distributed among the different items of traffic according to the nature of the demand. Coal, lumber, ores, will be offered for transportation only if rates are so low that, if they were applied to the whole traffic, the enterprise would not pay. Nevertheless, if these articles yield anything over the separate expenses incurred for them alone, the road will take them, because the other expenses are incurred for the traffic as a whole, and will not cease if the heavy traffic is given up. Other goods, of greater value in proportion to bulk and weight, will be offered for transportation in much the same quantities, whether the rate be as low as on coal and ores, or a good deal higher; and they will be charged rates which, if applied to the traffic as a whole, would yield very high profits for the enterprise. We do not usually think of the demand for the transportation of coal as small, or of that for the transportation of silks as large; but in the sense pertinent for this investigation—sensitiveness to change in prices—the demands are small and large respectively. A considerable coal traffic can be got only at low rates: a considerable traffic in dry-goods will come even at high rates. Their cost is mainly joint, and the services will be sold at rates determined by the nature of the demand.

This seems to me to be the fundamental explanation of the classification of freight. All the early railroad tariffs were simple, and made little discrimination between different sorts of commodities. As time went on, experi-

ence forced on managers, whether in charge of public or of private railways, that adaptation of rates to demand which is the inevitable outcome of the peculiarities of the industry. In the early days of the Pennsylvania Railway, it was doubted whether the road could undertake to carry coal. It was argued that any freight which did not yield two cents per ton per mile must be carried at a loss. But a clear-headed officer pointed out that many general and constant expenses must be incurred, whether or not the coal was carried, and that the items which alone would be affected by the new coal business were comparatively small. The experiment was tried of carrying coal at what then seemed very low rates, and the traffic soon assumed large proportions.\* In Germany, also, the early tariffs were simple; and the development of the system of classification was slow and gradual. In recent years, an endeavor has been made in the "car-space" or "natural" tariffs to return to the older and simpler way; and the virtual failure of the experiment supplies the latest illustration of the impossibility of fixing rates on the basis of the cost of the particular items of traffic. That tariff, first applied in Alsace-Lorraine, and afterwards extended to the adjoining parts of Germany, made a fixed charge for terminal expenses, and thereafter an equal charge per ton per mile on all goods. The reasoning was that dear goods cost no more to carry than cheap goods, and therefore should be charged no more. The vital mistake was the failure to perceive that neither dear goods nor cheap goods had, to any considerable extent, a separate cost of

\* See the passages quoted in Ringwalt's *Transportation Systems in the United States*, p. 130. Coal traffic presents a case as little favorable to the application of the principle of joint cost as could be selected. Coal is carried in cars which are used ordinarily for no other traffic; and roads like the Pennsylvania carry the coal from the mines on trains which usually haul no other freight. All movement expenses and car-repair expenses are therefore chargeable separately and distinctly to the coal traffic. Yet even here the joint expenses so far outweigh that the key to the understanding of rates must be sought in the principle applicable to them.

their own. After a few years' trial, the system was superseded by what was called a compromise tariff, but was virtually a classified tariff, in which demand, and not an assumed cost, became the prime factor in rate-making.\*

“Charging what the traffic will bear” is only a larger phrase for describing the general practice of which the classification of freight is a part. Wherever commodities are produced at joint cost, they are charged what the traffic will bear,—wool and mutton, beef and hides, silver and lead. We need not attempt to follow the principle to all of its applications,—to the rates on long-distance traffic as compared with short-distance traffic, to the rates on freight subject to competition as compared with non-competitive freight, to “back-loading” (a striking case of joint cost), to special and excursion rates in passenger traffic,—all of them cases in which the explanation of apparent anomalies lies in the fact that by far the greater part of the cost of rendering the service is incurred, not for the particular traffic in hand, but for the traffic as a whole. The fierceness of railway competition, due in part to the fact that the enormous plant is irrevocably committed to that particular business, is increased by the same circumstance. On competitive business, as on all business, the separable cost is small. Most of the expense of doing it is incurred, in any event, in the course of carrying on the transportation as a whole; and a railway will not retire from the competitive business as long as it yields anything above the small fragment of expense directly traceable to that particular traffic.

There is one further aspect of the practice of charging

\* For the details, consult Ulrich's *Eisenbahntarificesen*, and more particularly the passage at pp. 283-287, where Ulrich, himself much averse to “Werth-classifikation,” yet admits the need, in the present compromise system, of a further step towards classification in the rates on freight in less than carload lots. The new tariff is called a “reform tariff,” and did introduce reform in the way of simplifying the classification; but it is still a classified tariff,—that is, varies rates according to the nature of the demand.



what the traffic will bear of which a word may be said. That obnoxious phrase is used to describe two distinct things; on the one hand, the adaptation of rates to demand which results from joint cost; on the other hand, the adaptation to demand which results from monopoly. Thus Professor Hadley remarks that "wherever there is an industrial monopoly of any kind, there is a liability to discriminations."\* For simplicity of reasoning, it has been assumed, in the preceding paragraphs, that a railroad's business is carried on under the circumstances of free competition, and that therefore in the long run total cost determines total charges. But a railroad always has a monopoly as to some parts of its traffic; and, even where competition exists, it usually ends in combination of some sort, and in charges controlled only remotely and indirectly by competition. To the extent to which the element of monopoly enters, rates are again permanently affected by demand, or by what the traffic will bear. Any particular rate may be the result of the working of the two factors of monopoly and joint cost. The general range of charges on local traffic, for instance, may be determined quite without regard to cost or competition on the monopoly principle of getting the largest net return. The apportionment of these charges among the rates for different goods and from different places must be affected by the circumstances that all the transportation is produced, more or less, at joint cost. The traffic is charged what it will bear in two distinct senses.

Returning now to the main thread of the discussion, we may note some conclusions of practical importance which follow from the principle of joint cost. Obviously, there are peculiar difficulties in saying what is a "fair" or "reasonable" price for a commodity produced at joint cost with others. The Interstate Commerce Act prescribes that all charges shall be "reasonable and just";

\* *Railroad Transportation*, p. 124.

and the Commission has been led by this provision, among others, to the slippery problem of directly fixing rates. If the government were to undertake to regulate the price at which pig iron or steel rails should be sold, the task would be difficult enough, but the guiding principle would be comparatively simple: let pig iron be sold for what it costs to make, "cost" including ordinary profits. But suppose it were attempted to fix the fair price for hides, horns, fat, rump, tenderloin? The complex conditions suggested by this question exist on a huge scale, in regard to railroad rates; and this even in the simplest case, where the total return got by a railroad in all its traffic is assumed to be determined by the total cost. When we bear in mind the actual situation in the United States,—on the one hand, the extraordinary complexity of the business, the constant transfer and rearrangement of industry, and the corresponding shifting in the demand for transportation; on the other hand, the monopoly element in a railroad's business, the extent to which many roads are in the position of rent-yielding natural agents, the enormous vested interests,—the difficulties of saying what are "reasonable" rates seem well-nigh insuperable. The Interstate Commerce Commission, in its interpretation of the phrase, has wisely refrained from putting the test of reasonableness in any assumed cost of services, and in practice has accepted the existing system of rate-making as on the whole reasonable.

These considerations do not show, nor are they here presented with any intention of showing, that public regulation of rates is impolitic or impracticable. But they may help to make clear how delicate and difficult a task the regulation of rates must be; and they seem to me to show clearly that, of the anomalies in railroad rates which are the subject of most complaint, some at least would not disappear under the most extreme form of public regulation,—State ownership and management. Professor Had-

ley has suggested that a government which should undertake to run a railway on the principle of tolls — that is, on the principle of charging for the transportation services what they cost — must arrange its rates in such manner that “each item of business shall bear its share of the fixed charges.”\* I would not speak otherwise than with high respect of Professor Hadley’s contributions to the literature of railways; but in this case his conclusion, to my mind, does not follow. The general determination of rates on the principle of cost would make it by no means necessary that each item of traffic must pay its share or any share of the fixed charges. If a government tried to run its railways on such a plan, of apportioning the joint expenses equally among all classes and items of traffic, it would find that there was a large traffic, mainly of bulky goods and long-distance hauls, which its rates prevented it from getting; while yet it had incurred, whether this traffic came or not, by far the greater part of the expenses incident to it. The financial interest of the government\* would inevitably push it to making rates on this elusive traffic low enough to attract it: the traffic would be charged what it would bear. It is the nature of the industry which explains the fact, abundantly proved by experience, that government management does not lead to the disappearance of classification and apparent discrimination in rates. Further, it may be said that not only the financial exigencies of the enterprise, but the endeavor best to utilize the railway plant and labor, would lead to some such result. A government managing a railway system may be expected to consider, not merely how

\* *Railway Transportation*, p. 250. But elsewhere, in speaking of the analogy of certain railway rates to the low price at which a manufacturer sells a by-product, Professor Hadley brings out clearly the principle of joint cost. *Ibid.*, p. 113, note. See also his remarks in the paper on railway statistics in the *Publications of the American Statistical Association*, New Series, No. 6. In Wagner’s *Finanzwissenschaft*, 3d ed., pp. 291-296, substantially the same view is advanced as that of Professor Hadley, discussed in the text.

it is to get back the expenses incurred, but how it is to make the service most advantageous for the community at large. The best utilization of its service certainly could be secured only by charging on the slow-demand traffic the rates which would induce it to appear; while the expenses could be recouped only by charging on the other traffic the higher rates which it would bear. The principle of tolls, in sum, would no doubt lead a government system of railways to get back in the total income the total expenses incurred in rendering the services; but its own financial interests and the general interests of the community would lead it to refrain from distributing the fixed charges and other joint expenses among the various items of traffic on any rigid scheme.

We may return now to the point at which we started, and consider again Professor Cohn's speculations as to the characteristics of a railway's operations. If the reasoning presented in the preceding pages is sound, obviously his conclusions are not tenable. If the true explanation of the apparent anomalies in the adjustment of railway rates is to be sought in the principle of joint cost, the ethical principle of *Leistungsfähigkeit* may be brushed aside, and the analogy to taxation disappears. The whole train of reasoning is doubtless but a phase of the general reaction in economics. The attempt to draw a sharp line of distinction between ethics and economics has led to a counter-disposition to bring in the ethical element at every possible point of contact with economic discussion, with results, in this case at least, that are not helpful for a true understanding of the phenomena. No doubt a railway, whether in the hands of a private corporation or of the State, might fix its rates, if it chose, on some basis of justice. There is an industry, nowadays always in the hands of the State, in which some effects of public policy, as distinct from mere business expediency, can be readily seen. This is the postal service, in which the rates on printed

matter, low as compared with those on written matter, are the result, in part at least, of general policy. No doubt the fact that the cost of carrying the printed and written matter is largely joint, helps in explaining the apparent anomaly; but the educational advantage of the community has been the main motive for the low postage on printed matter. The case is indeed one in which the motive is a general one of public policy rather than an intention of lightening the burdens of the poor; but the motive is different, and the explanation of the varying prices different, from those which we should find in the usual phenomena of exchange. But with railway rates the case is different. I trust I have succeeded in showing that the main peculiarities in railway rates, those which have appeared under government management as well as under private management, are not to be explained on a supposed basis of justice and right, by which the well-to-do are charged high, and the needy are left off easily. One might as well say that the prices of rump steak and of tenderloin were fixed as a matter of mercy on the poor consumers of rump and of tax on the rich consumers of tenderloin, and argue thence that, since the delicate business of adjusting this apportionment could not be intrusted with safety to private persons, the State should take into its hands the business of cattle-raising. If the explanation of railway rates from *Leistungsfähigkeit* is untenable, the particular argument for government ownership which rests on it must also go; and to my mind the case for public management is not much weakened by the loss.\*

\* Cohn refers to the tolls of the old turnpike companies as illustrations of his principle, and calls attention to a passage in the *Wealth of Nations* (Book V., chap. i. p. 326 of McCulloch's edition) in which Adam Smith says: "When the toll upon carriages of luxury, upon coaches, postchaises, etc., is made somewhat higher in proportion to their weight than upon carriages of necessary use, such as carts, wagons, etc., the indolence and vanity of the rich is made to contribute in a very easy manner to the relief of the poor by rendering cheaper the transportation of heavy goods to all the different parts of

No doubt it is often said in popular discussions — Professor Cohn takes pains to cite utterances of the sort — that it is “right” that expensive goods should pay high rates, and cheap goods low rates. But such phrases are only a part of the disposition, common among those untrained in economic reasoning, to accept as right and just that which has worked itself out in the long run from the play of ordinary economic forces. They are like the phrases that fair wages and fair profits should be allowed, which at bottom mean nothing more than usual wages and usual profits. The true explanation of classification based on the value of the goods is simple enough: on goods that have high value for little bulk and weight, a given charge of so much per hundred weight will usually have much less effect in checking traffic than the same charge on goods of great bulk and low price.

Sometimes, indeed, the common though not necessary connection between the value of the goods and the rates charged on them has led to statements that assume a more scientific form. Thus it has been laid down that the true principle governing railway rates is not cost of service, but “value of service.” A recent expression to this effect

the country.” “Here, then,” comments Cohn, “in Adam Smith, the greatest authority of orthodox economics, we find expression of the view, nowadays opposed as a ‘new-fangled theory,’ that it is just to consider the means of the persons using a highway and to apportion amongst them on that basis the total expenses of the highway.” *Englische Eisenbahnpolitik*, p. 68. But the paragraph quoted by Cohn from Adam Smith is open to the same difficulty as Cohn’s own attempt to explain, on principles of justice, low railroad freights on bulky goods: are not the bulky goods as likely to be used by the rich as by the poor? Elsewhere, however, Adam Smith notes the peculiarity of beef and hides, mutton and wool, as commodities having a joint cost. “The price of both great and small cattle which are fed on improved and cultivated land must be sufficient to pay the rent which the landlord and the profit which the farmer has reason to expect from improved and cultivated land. If it is not, they will soon cease to feed them. Whatever part of this price, therefore, is not paid by the wool and the hide must be paid by the carcass. The less there is paid for the one, the more there is paid for the other.” Book IV, chap. viii. p. 294. In this passage, and in others of similar tenor (e.g., Book I, chap. xi. pp. 106, 108), Mill probably got the hints for his more elaborate discussion of the principle of joint cost.

is in Professor Seligman's valuable articles on the Interstate Commerce Act; and the Interstate Commerce Commission itself has frequently given emphasis to value of service as its test of the reasonableness of rates.\* So far as the phrase is a convenient mode of stating to the general public the consequences which flow from the element of joint cost in railway services, and of calling attention to the inevitable effects of demand on rates, it may be useful. But surely it gives no real help towards solving the difficulties of the problem. It cannot mean that rates are based on the value in use, or the intrinsic utility, of the service. On that ground, grain and coal presumably would be charged higher rates than silks and spices. If it means that rates depend on the value of service in the sense of its value in exchange, we are confronted with the obvious difficulty that the rates *are* the value in exchange of the service. The explanation then says simply that charges are determined by what is charged; which does not much advance matters.

The explanation from joint cost, which is put forward in this paper as the key to many of the apparent anomalies

\* Professor Seligman's statement is in the *Political Science Quarterly*, vol. ii. p. 330. The "value of service" idea is not a new one: it appeared in some of the earliest discussions of railway rates. The most earnest appeal to it as the one explanation of railway rates is in La Gournerie's *Etudes sur l'Exploitation des Chemins de Fer*, p. 117 and following. A characteristic passage from the Interstate Commerce Commission's opinions is the following: "The value of service is generally regarded as the most important factor in fixing rates. It furnishes, theoretically at least, a foundation for an equitable apportionment that takes into account all interests,—those of the carriers, the owners of the property carried, and the public,—as well as the dissimilarity of the merchandise. . . . The value of service to a shipper, in a general sense, is the ability to reach a market and make his commodity a subject of commerce. In this sense, the service is more valuable to a man who transports a thousand miles than to a man who transports a hundred miles, so that distance is an element of the value of service. In a more definite and accurate sense, it consists in reaching a market at a profit, being in effect what the traffic will bear to be remunerative to the producer and dealer. If the charge for service leaves no profit to the shipper, the traffic is worthless, and necessarily ceases." 2 *Interstate Commerce Commission Reports*, 636. Compare similar passages in *Ibid.*, 474, 545. Nothing could illustrate better the hopeless confusion to which the supposed principle leads.



lies in railway rates, is applicable not only to the great and conspicuous case of railways, but to many other industrial operations. The practical importance of the theory of value which rests on production at joint cost, becomes greater and greater with the general tendency to use a large plant for varied purposes, and with that better utilization of products formerly waste which results from the advance in the arts. Cotton, cotton-seed oil, and cotton-seed cake; beet-sugar and beet-cake; the various articles into which coal-oil is converted; silver and lead from lead ores,—these are familiar illustrations. Some other cases which, like railroad rates, have puzzled writers on economics, can be referred to the same principle. The prices charged to the play-goers for opera chairs, seats in the pit, and gallery standing-room have been discussed, as if they were quite anomalous, and inexplicable on the general theory of the bearing of cost on value. Similarly, the relative prices of first-floor and fifth-floor apartments have proved puzzling. Obviously, the element of joint cost is largely present in these cases; and the principle helps to clear up such real difficulties and anomalies as they present.\*

In conclusion, the reader may be reminded that this paper makes no pretence of considering the problem of railway rates in all their bearings. To explain all the phenomena, or to say the last word on the subject, would require a more exhaustive and difficult discussion. Other considerations than those which flow from the fact of joint cost must then receive their due weight. The enormous fixed capital and the consequent impossibility of retiring from the enterprise if it becomes unprofitable, the greater or less degree of monopoly, the wide gulf between railway managers and investors, sometimes leading to consequences

\* The cases last mentioned are referred to by Professor F. J. Neumann in Schönberg's *Handbuch der politischen Oekonomie*, vol. i. pp. 230, 233 (1st ed.). The explanation suggested in the text does not seem to have occurred to this ingenious writer.



of its own,—these and other elements are to be taken into account. The circumstance that the various services are rendered mainly at joint cost is only one of those in which railways differ from most industries. But it is one whose effects ramify into every part of a railway's operations. When we discuss the effects of any one of the other distinguishing features, such as the enormous and immobile plant, the working of competition, the effect of monopoly, we must bear in mind that there are always present the modifying effects of the principle of joint cost. At the same time this important peculiarity of railway operations, like most of the differences which they present from the conditions of other industries, is a divergence in degree rather than in kind. It is extreme, but not anomalous. Railway rates need not be detached from the general phenomena of exchange and set apart as explicable only on grounds of their own; and the main object of the present paper is to make some contribution towards determining their proper place in the theory of value.

F. W. TAUSSIG.

## CO-OPERATIVE INSURANCE AND ENDOWMENT SCHEMES.

THE experiment in co-operation, which was begun in 1868 by the thirteen men who formed the nucleus of what is now the Ancient Order of United Workmen, has led not only to organizations of a magnitude not dreamed of, but to organizations of a sort not dreamed of. To enumerate the fraternal and other orders or societies, which have been formed after the fashion of the Ancient Order of United Workmen, for giving life insurance at low cost, would be well-nigh impossible. They have grown up in almost, if not quite, every State in the Union, and their united membership is many more than a million. Some of them admit to membership any candidates of good moral character who are personally acceptable to the order. Others, such as the Odd Fellows' Mutual Relief Associations, limit the membership to persons of particular affiliations, or particular trades or localities. Out of the co-operative death-benefit orders have grown the so-called co-operative endowment orders, and the bond and investment companies. The endowment orders and the bond companies have sprung up mainly in Maine, New Hampshire, Massachusetts, Virginia, and West Virginia.

The first thing to impress one who makes a study of these three sorts of organizations is that none of them even pretends to know what it can do for its members. Each organization points to some other, and says: "See what these people have done! What has been done once can be done again." The endowment orders and the bond companies cite the experience of the death-benefit orders, who, in turn, cite the experience of insurance companies. Since experience is evidence only so far as conditions are similar, a right view of the claims of these organizations is possible only when we have a right view of the principles of insurance. It is worth while, then, to look

for a few moments at the method of determining insurance premiums.

It is plain at the outset that the principles applicable to life insurance are different from those applicable to fire and marine insurance. In fire and marine insurance the risk is comparatively constant, in life insurance it is daily increasing. After a certain age, the probability of death increases with each year, and the risk assumed by the insurer becomes greater.

Since life-insurance premiums include a contribution for expenses, called "loading," which is subject to no general ascertainable laws, we are at first concerned with but a part of the premiums,—the contribution for insurance proper. If, as the American experience of mortality would indicate, of 84,000 persons living at the age of thirty-two, 723 will die in one year, the cost of insuring one person at the age of thirty-two for one year for \$1,000 will be \$723,000 (the amount of the death claims) divided by 84,000 (the number of persons insured), or \$8.61. If, however, the premium is paid at the beginning of the year, and the death claims are assumed to be paid at the end of the year, the premium will be a sum which, invested for one year, will yield \$8.61, or, at 4 per cent. interest, \$8.28. This cost of insurance must increase year by year, for the death-rate is constantly increasing. In the second year of insurance — *i.e.*, between the ages of thirty-three and thirty-four — the deaths of the original 84,000 policy-holders will be 726, and the death-claims will be \$726,000. If the original 84,000 policy-holders were, at the age of thirty-two, to procure paid-up policies for two years, they must pay a sum which shall in one year yield \$723,000, or, as we have seen, \$8.28 each, and, in addition, a sum which shall in two years yield \$726,000, or \$7.99 each. In the third year the deaths will be 729; and the sum which will yield \$729,000 in three years is \$7.72 from each. The cost of a paid-up policy for three years would thus be the sum of \$8.28, \$7.99, and \$7.72, the reduction in the amount for each year being due to increased interest earnings and in spite of an increasing death-rate. The cost of a paid-up policy for life would be ascertained, upon the same principle, by adding together the amounts which, if paid at the age of thirty-two by all the persons insured, would yield by

the end of each year the sum which would pay the death-claims becoming due each year, or \$308.71.

Comparatively few men, however, care, or indeed have sufficient means, to purchase paid-up policies for such large amounts as they wish to carry. Most insurance is obtained by the payment of periodical premiums. As in calculating the cost of insurance one must consider the probability of death in each year, so in calculating the annual premium which will equal a single payment of \$308.71 one must take into account the probability that the policy-holder will be alive to make his payment. Since the first annual premium is to be paid at the time that the policy is taken, 84,000 annual premiums will be the first payment. Since the second payment is not to be made until the end of the first year, and since 723 persons will die in the year, the value of the second payment is but 83,277 premiums. Moreover, if interest is at 4 per cent., the present value of the premiums is but 96.15 per cent. of their amount. The present worth of the third and of every subsequent premium may be ascertained in a similar manner; *i.e.*, the present worth so far as determined by the probability that the policy-holder will be alive to make the payment, multiplied by the present worth so far as determined by loss of interest. The annual premium will thus be a sum which, paid for life, will equal in value the single premium determined by the method previously explained. The net annual premium at the age of thirty-two will be \$17.18.

Since the actual cost of insurance, aside from interest earnings, for the first year is but \$8.61, it is evident that much of the first premium of \$17.18 is applicable to a reserve fund. Since the death-claims increase in number in the later years, owing to a higher death-rate, the annual payments, if uniform for life, must exceed the cost of insurance in the earlier years. Each year the amount of the premium which is applicable to the reserve fund is smaller than in the preceding year, and in the later years the premium paid is actually less than the cost. If, however, the death-rate corresponds to that upon which the premiums were based, the reserve fund just suffices to pay every death-claim at maturity.

Since there is always some reserve belonging to the policy of

every living policy-holder, the question has arisen, What shall be done with the reserve belonging to the policies of those who fail to pay their premiums? The various answers to this question give rise to the several systems of insurance known as the "tontine" and the "non-forfeitable policy," and that in which the stockholders get the benefit of lapses. When one realizes that the part of the annual premium which is applicable to the reserve fund is paid for future insurance alone,—*i.e.*, insurance which the policy-holder does not receive, if his policy terminates when he fails to pay his premium,—it is plain that the reserve ought in some way to be applied to his sole benefit, and cannot in strict justice be divided among the policy-holders, as under the tontine system, nor among the stockholders, as in the pure stock companies. It is not true, moreover, that the withdrawal of any policy-holder is an injury to those who remain,—unless, indeed, the number insured is so small that the death-rate is by the withdrawal raised above the average; for, whether the numbers be few or many, the premiums of each year added to the reserve from previous years will pay every policy at the death of the holder. The most enlightened opinion seems to favor the system of granting to those policy-holders who fail to pay their premiums so much paid up insurance for life as the sum on deposit with the company will procure. This is perfect justice. Many companies give the holder the option of drawing the present cash value of his deposit (less a surrender charge); and some State laws require that the option be given. Since, too, the insurance companies can afford to give full cash value (less expenses) for surrendered policies,—though they cannot be fairly asked to do so, since insurance is their business,—it is true that they can stop business at any time without failure to meet any liability. It is equally true, of course, that a company can continue old policies and meet every liability at maturity, even though no new business of any sort is taken.

The methods of the co-operative death-benefit orders and associations are of the simplest possible nature. The members of an order—or association—pledge themselves to contribute towards a benefit for the wife, children, or other beneficia-

ries of deceased members a specified sum of money. If, however, the members are so many that one assessment upon each member yields more than a fixed amount the balance of the assessment remains in the treasury of the order and is applied towards the payment of succeeding death-claims. Expenses are generally provided for by a per capita tax, and by profits realized from the sale of supplies to branch lodges. Some orders provide additional benefits in case of sickness.

Since assessments are called only to meet accruing liabilities,—*i.e.*, to meet the actual cost of insurance month by month,—no estimates of any sort are necessary. The payments are made for actual happenings, and not for estimated happenings. Manifestly, however, the system is in one respect so simple as to work injustice. If A, who joins the order at the age of forty-four, pays no greater sum on each assessment than B, who joins at twenty-five, the probability is that the cost of B's insurance will have been, at his death, one and one-half times the cost of A's, at A's death; for the expectation of life at twenty-five is one and one-half times that at forty-four. The inequality arising from uniform assessments has therefore given rise to graduated scales, though many orders still maintain uniformity.

Assessment insurance—and it may perhaps best be mentioned here that assessment insurance is offered by a few purely business companies in competition with the co-operative assessment orders—seems to have the advantage over premium insurance that, if the death-rate is below the average, the policy-holders get the benefit through a reduction in the number of assessments. This gain, however, is not peculiar to assessment insurance; for the purely mutual companies divide the gain among their policy-holders.

The most obvious difference between assessment orders and premium companies is in their attitudes towards reserve funds. The assessment orders do not seek a level rate of annual contributions. They ask their members to pay in each year just what the insurance in each year costs. They have found that the death-rate of insurance companies and in fraternal orders is about 10 in 1,000, and they reason that therefore \$10 can insure \$1,000 one year. The assessment orders may be said

to have sprung out of protest against life insurance premiums of from \$20 to \$50,—seemingly from \$10 to \$40 in excess of the cost. Many of the orders seem to look upon reserve funds as gratuities from policy-holders to stockholders or to officers. They point to the expensive buildings erected by rich premium companies, and seem to wish people to believe that the buildings are of no benefit to policy-holders. They seem unaware of the fact that the reserve fund is all paid ultimately to policy-holders, and that no better investment can be made of it by the companies than in costly buildings. It would be possible for any insurance company to abandon the reserve fund without loss or gain to itself or to policy-holders. Since the purpose of the reserve fund is to equalize payments for life, and to prevent the necessity of increasing the premiums with each year of life,—thus making them heaviest when the policy-holder would be least able to bear them,—a scale of increasing premiums would obviate all necessity for a reserve.

The difference between assessment orders and premium companies is, however, more fundamental than this. The orders deny the necessity for either a reserve fund or increasing premiums. They hope to keep the cost of insurance for every year down at the level of the early years: they strive to bring in so many new members each year that, though the death-rate among the members of long standing is increasing, the death-rate of the whole body shall be kept down by the low rate among the newer members. It is true that as long as the death-rate can be kept down at 10 in 1,000, so long will payments of \$10 for every \$1,000 of insurance meet all liabilities.

This risk of ability to increase the number of policies rapidly, year after year, the premium companies are unwilling to take: they ask each policy-holder to pay as premiums a sum which shall insure his individual life; and they know that, whether the number of their policies increases or decreases, their assets will meet their liabilities at maturity, unless, indeed, some calamity, such as may happen in any business, destroys some of the assets. But the risk of ability to increase membership the assessment organizations deliberately

assume. They desire many members, in order that there may be many to contribute towards the payment of death-claims; but they see that new members — *i.e.*, new resources — bring new liabilities in the same proportion. If, therefore, the cost of insurance is to be kept low, the new liabilities of each year must be met by new resources, which, in turn, bring new liabilities for succeeding years. The first cessation of growth will bring a rapid rise in the cost of insurance; for the liabilities incurred in previous years will go on increasing, — because of increasing death-rate, — but must be met by resources less rapidly growing.

It seems at first sight as if this increasing cost were not a serious matter, for after a man has had very cheap insurance for several years he can afford to bear an increased cost. If, however, the membership of an order declines, — *i.e.*, if more die in each year than are added, — the rise in cost will much more than counterbalance the original saving. Though all, on joining an order, pledge themselves for the benefit of each other, those who die early pay nothing for the benefit of those who survive them. If no new members are added, the old members who have contributed for the beneficiaries of those who have died must now contribute all that is contributed for their own beneficiaries. In the premium companies, on the other hand, each policy-holder, as we have seen, pays each year an extra sum proportioned to the improbability of his living and making the later payments; and the contributions for this purpose of those who die early are available to reduce the cost — which would otherwise be excessive — for those who die late.

That the fraternal orders recognize the necessity for increased membership is shown by the frequency of their appeals to members to be active in securing new members. The Supreme Secretary of the United Order of the Pilgrim Fathers, in a report for 1890, said: —

In 1884 our gain was not equal to the occasion, and we felt its effects in 1885. We made the proper gain in 1887 and 1888, and we held the assessments to an average of ten and a fraction each year for five years. In these years our gain was from 20 to 23 per cent., and our assessments ran in a parallel ratio. In 1889 our proper gain should have been 2,335,



or 23 per cent. It was 1,643, or 17 per cent. The effects of this reduction were not appreciably felt in 1889, but will be felt in 1890 and after years. . . . The cause can be removed and recovery follow, and two words comprise the remedy,—“individual effort.” . . . I have thus noted where we fell short and advised a sure remedy; but there is another extreme, and there lies something to be avoided. A too rapid growth in any one year adds to the necessity for a greater growth in every coming year. We want in 1890 a net increase of twenty-six hundred members. Less than that will be a source of danger: largely in excess of that will do us no good, but will work a positive injury and greatly add to the necessities of the future.\*

No one can say whether the assessment insurance organizations can by the growth of membership so far keep down their death-rates as to furnish insurance ultimately cheaper than the estimates of the premium companies. In the past they have not kept the cost from rising. The table below will show what their experience has been. Since the number of assessments, the amount of the assessments per capita, and the death-rate are all indicative of the same thing, we can use whichever set of figures is most readily obtainable from official sources:—

|      | Ancient Order<br>of United<br>Workmen.<br>Death-rate.† | Royal<br>Arcanum.<br>Death-rate.‡ | Knights<br>and Ladies<br>of Honor.<br>Cost, Age<br>35-40.§ | Home<br>Circle.<br>Number of<br>Assessments.¶ | American<br>Legion<br>of Honor.<br>Death-rate.‡ |
|------|--|-----------------------------------|--|---|---|
| 1880 | 7.9  | 4.3                               | \$8.55   | 0   | 1.6   |
| 1882 | 8.2  | 6.4                               | 9.90   | 3   | 6.5   |
| 1884 | 7.8  | 6.8                               | 9.00   | 10  | 9.1   |
| 1886 | 8.9  | 7.4                               | 10.80  | 11  | 9.9   |
| 1888 | 9.7  | 7.7                               | 10.80  | 15  | 13.1  |
| 1890 |  | 8.3                               | 11.25  |   | 13.1  |

These five organizations have been chosen because in numbers and in membership they represent different conditions.

It is not safe to say, because the orders never have gained in numbers sufficiently to keep down the cost, that they never will; but it is safe to say, since new fraternities are continually coming into the field and entering into competition for new members, that they are not likely to be able ultimately to

\* *Report of the Supreme Secretary*, April 2, 1890, p. 16.

† *Proceedings of the Supreme Lodge*, 1889, p. 58.

‡ *Official Circular* of August 1, 1890, p. 13; and *Massachusetts Insurance Report*, 1890, II., lviii.

§ *Deputies' Statistical Chart*, No. 2, p. 3.

¶ *Circular* of 1890, p. 8.

‡ *Circular* of 1891, p. 3.

furnish insurance much cheaper than the premium companies, except, of course, so far as they make a saving in expenses. If they succeed in furnishing much cheaper insurance, it will be by continuing business to the end of the world, always increasing in numbers, and because the increasing numbers have made it possible to anticipate the great gain which will come at the end of the world from the volume of escaped liabilities.

In the direction of expenses, however, vast opportunities are open for fraternal orders. They can greatly reduce the "loading" of premiums,—the contributions for expenses. Even here there are not so great possibilities as the orders seem to believe. One of their favorite points of attack upon life companies is the salaries of presidents. Nor is the fact strange. It is almost impossible for a man who can earn at the utmost but six or seven hundred dollars a year to conceive that any man can earn for his employer fifty, twenty, or even ten thousand a year. He cannot realize the value of great business ability in economizing forces, discovering good investments, and detecting unsafe enterprises. If such prejudices can be overcome, the possibilities of cheap insurance are great, and that, too, without resort to any scheme which trusts to increased membership and perpetual corporate existence for success. The total disbursements of all premium life insurance companies doing business in Massachusetts in 1890 were \$123,200,000, of which \$38,300,000 was of the nature of expenses and \$84,500,000 was paid in one way or another to policy-holders.\* The amount paid otherwise than to policy-holders was thus 45 per cent. of the amount paid to policy-holders. The expenses of the Supreme Council of the American Legion of Honor, a large fraternal death-benefit order, were in two years \$94,000, and its disbursements to members were more than \$5,000,000.† The percentage of expense to benefits is thus less than two; but, since the Supreme Council does not bear all of the expenses,—though it receives and pays all benefit funds,—the ratio is not a fair representation of the actual

\* *Report of Insurance Commissioner of Massachusetts*, 1891, Part II., pp. xxii. and xxiii.

† *Proceedings of Supreme Council*, 1889, pp. 28, 31, and 169.

cost. Even if it were quadrupled or taken tenfold, however, it would still teach something of the possible savings from co-operation. All commissions to agents—a very large item—and many clerical expenses could be saved; for every member is an agent, and the officers of subordinate lodges can do much of the work for which any business company now sustains a corps of clerks.

The endowment orders claim fellowship with the death-benefit orders; but, although many endowment orders were instituted by prominent members of death-benefit orders, the National Fraternal Congress, a conference of delegates from death-benefit orders, has year after year refused to indorse the endowment plan. In 1890 the constitution of the Congress was amended so as to read: "No Fraternal Society, Order, or Association, shall be entitled to representation in this Congress unless . . . the purposes are confined to visitation of the sick, relief of distress, burial of the dead, protection of widows and orphans, education of the orphan, payment of benefit for temporary or physical disability or death. . . . We repudiate the speculative Societies, whose brief aim is to pay sums of money to members during life, without regard to distress or physical disability; and declare that the aims of such Societies are entirely opposed to the principles upon which the Fraternal Beneficiary Societies are founded."\* Since both systems aim at ultimately giving every member whose claim is paid much more than he contributed, and since both systems will be able to do this only if they keep on growing until the end of the world and thus avoid the necessity of paying the multitudes who will then be members, the claim to fellowship is not wholly groundless.

The endowment orders generally promise to pay a specified sum of money at a specified time, provided that one assessment upon the members will yield that sum: otherwise the sum to be paid does not exceed one assessment.† Since the payment of endowments is met by levying so many assessments as may be necessary, the system resembles the death-

\* *Journal of Proceedings*, 1890, pp. 56 and 57.

† For extracts from a typical constitution, see Appendix A, p. 487.

benefit system. Indeed, as if the systems were in every respect similar, the endowment orders cite the amounts paid by deceased members of death-benefit orders as proof of the cost of endowments. If, it is said, the death-benefit orders have paid the families of all deceased members \$1,000 for \$100 after an average membership of five years, it is proof that endowment orders can pay \$1,000 in endowments in five years at about the same cost. It does not seem to occur to those who advance this argument that those who lived longer than five years have paid the insurance of those who died, and that, if all claims had matured in five years,—as those of five-year endowment orders will,—the orders would have gone into utterly disgraceful bankruptcy.

The endowment orders have three sources of income besides taxes and assessments for expenses. The first is "lapses." Many who join the orders and pay a few assessments fail to meet further calls: what they have paid to the orders is forfeited, and is applied to the payment of maturing certificates. Upon the justice of such a plan little can be said. If a man is so careless that he neglects to pay his assessments, it may be right that he should lose all that he has paid; but whether inability, temporary or otherwise, should work such severe forfeiture is a more serious question. Some orders, believing that forfeiture is too severe, have established a cash surrender value for certificates which have been in force a reasonable length of time. Such payment, however, withdraws a large part of the gain arising from lapses, and by so much reduces the strength of the argument that lapses contribute to the immense gains realized upon endowment certificates. Even those orders which refund nothing can realize but little profit from lapses. The lapses in three of the largest five-year orders of Massachusetts in 1890 averaged less than 7 per cent. of the total membership at the end of the year.\* In the three largest seven-year orders the average lapse-rate was  $6\frac{1}{2}$  per cent. No one-year orders had been in existence a year on Dec. 31, 1890; but for such time as they had been in existence the lapse-rate in the seven largest orders averaged 2 per cent. Moreover,

\* *Reports of the orders to the Insurance Commissioner of Massachusetts.*

since the lapses occur chiefly in the earlier months of membership,—when the member has little to lose,—the gain arising from lapses is not fairly indicated by the lapse-rate. Since, too, most of the orders are young and have practically none but new members, the lapse-rate is probably above the normal. In the order of the Iron Hall, the oldest and largest order,—organized in 1881, and which may be said to have settled down to a normal condition,—the lapse-rate in 1890 was  $5\frac{3}{4}$  per cent.\* The same rate for seven years—the term of maturity—would mean that 38 per cent. of all who join would forfeit something by withdrawal. If one-half of the lapses, or 19 per cent., occurred in the first year, 8 per cent. in the second, 7 per cent. in the third, 4 per cent. in the fourth, 3 per cent. in the fifth, 2 per cent. in the sixth, and 1 per cent. in the seventh,—which seems not an unreasonable distribution,—the benefit to the order will be as if 15 per cent. of all the members, after paying all of the assessments, lost their claims to endowments. The gain from lapses would then be 15 per cent.

Another item of resource for the orders is interest. They pay benefits in case of sickness, with the understanding that the amount of benefits paid shall be deducted from the face of the endowment certificate at maturity; and most of the orders charge 6 per cent. interest on these advances. In addition, most of the orders establish a reserve fund for the ultimate payment of endowments, and invest this fund in securities. The interest arising from these investments must be added to their resources.

In this connection, too, it may be well to say that there is little ground for the popular impression that the Massachusetts law grants special protection to the holders of certificates which mature in the distant future. The law provides that whatever reserve the orders keep shall be deposited with the State Treasurer. No law requires that the orders shall keep any reserve. They can at any time withdraw the reserve and apply it towards the payment of any endowment certificates. Some orders have accumulated and disposed of large reserves, and will probably continue to accumulate and disburse reserve

\* Report of the order to the Insurance Commissioner of Massachusetts.

funds as fast as certificates mature. With the exception of provision for expenses and death-benefits,—and some orders pay death-benefits,—the law allows assessments only under two conditions: for sick-benefits, with an additional sum of like amount or less for the reserve fund; and, within three months of the maturity of certificates, so much as may be necessary for their payment,—all of which may be deposited in the reserve fund.\* It is thus plain that the amount that any order can levy for its reserve fund, previous to three months from the maturity of its next certificate, is limited by its sick-benefit claims. It cannot, then, often accumulate a heavy reserve; and, unless it is willing to levy heavy assessments within three months of the maturity of certificates, it may be obliged to use its reserve fund almost as fast as it is accumulated.

The third source of profit to the orders is new membership. It is obvious that, if twenty men are assessed in order that endowments of \$1,000 may be paid to ten of their own number, the cost of the endowments to those who receive them will be but \$500, since \$500 from each of twenty men will yield \$10,000. Upon the ability of the endowment orders to increase their membership without end depends largely their ability to furnish cheap endowments. They see in the present and future population of the world potentially assessable members; and, though they see that new members bring increased liabilities, they look far down the ages and see in the last day an escape from all outstanding liabilities. Since none will care for his endowment at the last day, the last certificates need never be provided for, and the savings so made may be so far anticipated as to give cheap endowments now.

The competition for membership is so strong that there is even more doubt of the ability of the endowment orders to keep the increase up at the required rate than there is of the ability of the death-benefit orders. Between January 1 and December 31, 1890, thirty-four endowment orders began business under Massachusetts charters; and yet the legislature had forbidden the issue of new charters after May 28.† Since

\* Chap. 429, Acts of 1888, as amended by Chap. 341, Acts of 1890.

† For list, membership, etc., see Massachusetts Insurance Commissioner's *Report*, 1891, Part II., p. lxiv.

the orders are co-operative, there might seem to be little inducement for any one to take the initiative in organizing a new order; but the inducements are by no means small. In the first place, the first endowments may be paid at very small cost to the recipients; and the organizers will of course take the first certificates. In the second place, the members of the orders, expecting to get large returns for small investments, are willing to pay heavy per capita taxes or special assessments for expenses; and these expenses consist largely of salaries of officers and clerks, many of whom, if one may judge from the general air of laziness which prevails in many of the offices, are superfluous. A few moments spent in the office of some orders almost lead one to believe that the *raison d'être* of these orders is the incapacity of their officers for other work. When we find, too, that thirteen of the leading Massachusetts orders, with an aggregate membership of 119,000, paid as fees to agents for the organization of new lodges in 1890 \$276,000,\* we see that the possibility of having for one's self and one's friends the control over the expense fund of an order — even though that control be honestly and legitimately exercised — is likely to stimulate the establishment of orders and competition for membership.

A calculation of the possible future of endowment orders can be readily made. Let us assume extremely favorable conditions: that the order's claims for sick-benefits enable it to call for as many assessments as the state of the reserve fund makes advisable; that its sick-benefits are paid only to those whose certificates mature first, and therefore that no extra assessments are necessary; that it invests its reserve fund at 4 per cent. interest and that it gets 6 per cent. on sick-benefits advanced to members; that all assessments are paid at the beginning of the year; that its membership increases 50 per cent. each year; that the lapses are equivalent to a saving on matured certificates of 15 per cent., although it is but a five-year order. With assessments at \$5.00 and certificates of \$1,000 maturing in five years, we have the following annual conditions: —

\* Reports of the orders to the Insurance Commissioner of Massachusetts.

| <i>Year.</i> | <i>Membership.</i> | <i>Assessments.</i> | <i>Amount from Assessments.</i> | <i>Resources with Interest added.</i> | <i>Certificates matured.</i> | <i>Lapses.</i> | <i>Liabilities.</i> | <i>Balance.</i> | <i>Cost of Endowment.</i> |
|--------------|--------------------|---------------------|---------------------------------|---------------------------------------|------------------------------|----------------|---------------------|-----------------|---------------------------|
| 1            | 100                | 14                  | \$7,000                         |                                       |                              |                |                     |                 |                           |
| 2            | 150                | 14                  | 10,500                          |                                       |                              |                |                     |                 |                           |
| 3            | 225                | 14                  | 15,750                          |                                       |                              |                |                     |                 |                           |
| 4            | 338                | 14                  | 23,060                          |                                       |                              |                |                     |                 |                           |
| 5            | 507                | 14                  | 35,490                          | \$103,270                             | 100                          | 15             | \$85,000            | \$18,270        | \$350                     |
| 6            | 761                | 14                  | 53,270                          | 75,126                                | 50                           | 7              | 43,000              | 32,126          | 350                       |
| 7            | 1,141              | 14                  | 79,870                          | 117,506                               | 75                           | 11             | 64,000              | 53,506          | 350                       |
| 8            | 1,712              | 14                  | 119,840                         | 182,108                               | 113                          | 17             | 96,000              | 86,108          | 350                       |
| 9            | 2,568              | 14                  | 179,760                         | 279,161                               | 269                          | 40             | 229,000             | 50,161          | 350                       |
| 10           | 3,878              | 14                  | 271,460                         | 337,702                               | 304                          | 46             | 258,000             | 79,702          | 350                       |
| 11           | *3,878             | 14                  | 271,460                         | 368,730                               | 435                          | 68             | 387,000             | -18,280         | 350                       |
| 12           | 3,878              | 40                  | 775,600                         | 795,186                               | 684                          | 103            | 581,000             | 194,600         | 480                       |
| 13           | 3,878              | 40                  | 775,600                         | 1,013,710                             | 1,123                        | 168            | 955,000             | 63,710          | 610                       |
| 14           | 3,878              | 40                  | 775,600                         | 881,373                               | 1,614                        | 192            | 1,422,000           | -540,723        | 740                       |
| 15           | 3,878              | 40                  | 775,600                         | 946,619                               | 453                          | 68             | 387,000             | -140,381        | 870                       |
| 16           | 3,878              | 36                  | 698,040                         | 585,542                               | 684                          | 103            | 581,000             | 4,542           | 980                       |

\* Now suppose stationary membership.

So long as the increase of membership continues at the assumed rate, we find that the endowments cost but \$350, or \$70 a year. As soon as the growth of membership ceases, increasing liabilities — due to the increasing membership of former years — fall upon stationary resources; and, since there are 3,878 members to pay 3,878 endowments, the cost, aside from lapses and interest, must be \$1,000, or \$200 a year. Those whose certificates mature in the eleventh, twelfth, thirteenth, and fourteenth years, however, have contributed less than their share of the now stationary cost, and that cost is made up at the expense of those whose certificates mature in the fifteenth and sixteenth years by depriving them of a part of their gains from lapses and interest. After the sixteenth year it is plain that the cost need not increase, for there will be always 3,878



members to pay 3,878 endowments every five years; and, since no one will have escaped for less than his just share, no one need pay more than his just share.

If, however, the membership decreases,—*i.e.*, if new members do not come in so fast as the old members retire or lapse,—the cost of endowments may rise to a ruinous height. If, for example, no new members enter the order after the sixteenth year, those who remain until the twentieth year will have contributed at the rate of about \$160 for four years, and, then, in the last year must furnish all of the money for their own endowments, or about \$1,800 in all. The speculative and extremely hazardous nature of the endowment orders is thus evident. Since, too, the profits from lapses and from interest form so small a part of their resources, it is difficult to see why the orders which have a five-year or longer period of maturity denounce as speculative those which have a short period.

Another scheme for enabling people to get rich quickly is that adopted by the so-called "bond and investment companies." Few, if any of them, are fraternal. They require bondholders to pay fees at regular intervals for division between their three funds, maturity or redemption, reserve, and expense. Bonds or certificates of each company are paid in numerical order as fast as the condition of the maturity fund allows.\* If an order has five hundred members paying into the maturity fund five dollars each per month, twenty-five bonds of one hundred dollars each will mature each month. If the number of bondholders increases, more will be realized from fees, and bonds will mature more quickly. Since a rapid increase of membership for a short time would yield great profits to those whose bonds were by that increase soon matured, and would cause a much higher cost to the new bondholders if the rate of increase was not maintained, many companies provide a minimum cost, so that the holder of a bond which matures before that minimum has been paid in fees shall suffer to be deducted from the face of the bond the difference between the amount paid and the minimum

\* For extracts from by-laws of a typical association, see Appendix B, p. 488.

cost. Other companies, for the same purpose, provide that no bond shall mature until after a specified number of months from the date of its issue.

The reserve fund is planned to equalize the cost of bonds; but, since the cost depends upon the increase of members,—a thing which no one can estimate,—its efficacy is a matter largely of chance. If, at any time, the cost of matured bonds rises, the directors can use the reserve fund, and thus bring the cost nearer the previous level; but, if the future growth of membership is such that the cost further advances, the reserve fund will in time become exhausted, and nothing will be available for preventing an indefinite rise in cost.

In the matter of lapses, the bond companies have an advantage over the endowment orders. Since their fees are periodical, they do not, as a rule, send notices. The lapse-rate is thus, of course, increased by the occasional thoughtlessness of bond-holders.

Another difference between the two schemes is in the probability of failure. An endowment order will practically fail if it cannot collect sufficient money to pay maturing certificates at the specified time. The bond companies, on the other hand, cannot fail: they have made no promise to pay anything at any specified time. Even though their treasuries were empty, and their numbers became stationary, they would fulfil every obligation; for their only agreement is that they will pay certificates as fast as the payment of fees furnishes the means. It is true that endowment orders can consistently with their contracts levy assessments as often as they need; but there are practical hindrances to the collection of such frequent assessments as would be sometimes necessary in order to extricate an order.

Though the fraternal death-benefit orders denounce the endowment orders, and the long-term endowment orders denounce the short-term orders, all of the orders unite in denouncing the bond companies. Yet all three of these sorts of organizations—death-benefit, endowment, and bond—are based upon the same mathematical truth: that ten men can pay five of their own number cheaper than five men can pay

themselves; and that the ten men will suffer no loss if they divide the cost of their own benefits with a sufficient number of new men. Unfortunately for the reputation of the bond companies, their plan is more obviously one of chance than those of their fellows.

The history of the endowment and bond movement is short. It may be said to have begun with the formation of the order of the Iron Hall in 1881. It did not reach large proportions until 1889. The success of the Iron Hall in making its first payments of seven-year endowments at very small cost seems to have opened the eyes of multitudes to the possibilities of this new sort of enterprise. During the next three years organizations modelled after the Iron Hall sprang up with great rapidity. At the end of 1889 twenty-two endowment orders were transacting business under Massachusetts law, and of these all but three had been organized during the year. At the end of 1890 the number had increased to fifty-six. After the legislature had forbidden the formation of new orders, May 28, 1890, an influx from other States began. By May, 1891, one hundred endowment orders from other States had registered with the Commissioner of Corporations, in order to do business in Massachusetts.\* During the same period the bond and investment associations made their appearance, and more than one hundred such organizations were registered with the Commissioner of Corporations.† As, moreover, some organizations of this kind are not incorporated, the number doing business exceeds the number reported; but it is not likely that the excess is great. The growth of the endowment and bond organizations in other States has not yet been officially reported and can only be guessed at; but, since Massachusetts has been the hot-bed for them, it is not safe to estimate the business at the same proportions, even for the New England and Middle States, to which it is mainly confined.

The legal status of the endowment and bond associations it is at present impossible to determine. Suits are pending, hearings upon the granting of injunctions are going on, and legislative bills are awaiting action. In Massachusetts, for

\* *Legislative Documents*, 1891, House, No. 503.

† *Ibid.*

example, the charter of new endowment orders is forbidden;\* issuing bonds upon the investment plan, either by Massachusetts or foreign corporations, firms, or persons, is forbidden;† but a bill forbidding endowment business to all orders which had not registered before May 28, 1890, has been referred to the next legislature for action. The executive of Maine, to give another example, has refused to grant further endowment or investment charters on the ground that the business intended is unlawful; but the legislature, on the other hand, has refused to prohibit the sale of bonds. Unless the organizations die a natural death,—as some have already done by failure in the cases of endowment orders, or by mutual waiving of contract in the cases of bond companies,—it is probable that much legislation and many judicial decisions will be necessary before the organizations will reach a clear legal position of any sort.

Since both the death-benefit and the endowment orders cite the experience of the English friendly societies,—such as the Order of Foresters and the Independent Order of Odd Fellows,—as proof of the permanent character of fraternal beneficial organizations, it is an interesting fact that the English orders are inclined to disavow all intention of giving members any advantage from growth of membership, except, of course, in the matter of reduced ratio of expenses. In 1870 the financial condition of the Manchester Unity of Odd Fellows, numbering 410,000 members, was examined. Upon the side of liabilities was placed the present value of all claims, which, according to the experience of the preceding twenty-five years, it was estimated would be ultimately presented on account of present members. Upon the side of assets were placed the amount of money then in the hands of the order, and the present value of all payments which it was estimated that present members would make. There proved to be a deficiency; *i.e.*, the present members, if living out their expectation of life and continuing membership, would not, under the existing scale of contributions, pay enough to enable the order to pay expected claims when due. The lesson of this first valuation was partially learned; for at the second valuation, in 1875, it was found that most of the lodges had so

\* Acts and Resolves, 1890, Chap. 341, Sect. 2.

† Acts and Resolves, 1891, Chap. 382.

far reformed their methods that the deficiency had been reduced about three-fourths.\* In 1885, too, a writer in the *Foresters' Miscellany*, discussing the payment of funeral-benefits from assessments, said:—

Surely, there is nothing more destructive of dignity and independence than a system which teaches men to rely not on their own provision, but on the advent of "new blood," some of which is not even yet born. Let us imagine (if we can) a bank which invited depositors to join it, not in order that the money paid in might be saved for their use, but that it might be used to pay other and older depositors, and which offered as security for repayment the possibility of future depositors joining and allowing their money to be used for that purpose. Such an institution would provoke a public outcry; and yet it would but parallel the levy system.†

The friendly societies have in general adopted, or are adopting, a system of contributions practically similar in nature to life insurance premiums. The contributions vary with the age at which the member enters, but are unchanged during the member's life; and with the system of level contributions is coupled, of course, a reserve fund corresponding in nature to the reserve fund of premium life insurance companies.‡ The English friendly societies, we may say, then, seeing the danger that stares in the face our own death-benefit societies, have adopted the plan already suggested for our own societies, of seeking cheapness of insurance through careful and economical co-operative management.

A word ought to be said in closing, perhaps, upon the honesty of the canvassing methods adopted by the three sorts of organizations which we have been considering. Of the fraternal death-benefit orders it is true that they are not so careful to avoid deceiving as should be desired. One of them says upon the first page of one of its circulars, "It is not an insurance company," and to that extent seems to avoid deception. On another page of the same circular, however, under the heading "What it will cost to carry \$1,000," it assumes twenty-four annual assessments a year, and does not remind the reader

\* *The Friendly Society Movement*, Rev. J. F. Wilkinson, London, 1886, pp. 89, 90.

† *Foresters' Miscellany*, June, 1885, p. 272.

‡ *The Friendly Society Movement*, p. 163.

that the cost so estimated is conditioned on a large increase in membership. Another order places at the head of one of its circulars these striking lines: "\$3.00 for \$1.00 a Certainty"; "\$1,000 for \$1.00 a Possibility." The logic by which it reaches the former conclusion is by a jump from "it is estimated" in one of the premises of the syllogism to "you will" in the conclusion. The orders seem very willing that possible members should deceive themselves. An unbiassed judge of an order would probably be forbidden by a sense of due proportion from descanting so fully upon possibilities as to forget to explain the conditions. It should be noted in this connection, perhaps, that, since the associations which limit their members to persons of particular trades, localities, or affiliations are not solicitors for general business, the charge of questionable methods cannot be made against them so reasonably, if at all.

The endowment orders seem more open to the charge of deception than the death-benefit orders. They show a greater forgetfulness in the matter of explaining conditions and of stating all the important facts, when citing historical examples. The bond companies seem to be no greater deceivers than the endowment orders.

None of these three kinds of institutions can be justly described as gambling, though all are speculative. In all of them, if no new members are added, the last members, after contributing for the benefit of others, must furnish all of the money for their own benefits; but, since the increase of membership is to great extent dependent upon the exertions of certificate-holders, the risk is not a gambler's risk. The only protection that the community needs against them is that deception shall be impossible. It is almost safe to say that, if no one could be at all deceived, all associations which give to present members the benefit of increasing membership — beyond the saving in expenses — would ultimately die. Many men love risk so much that they are willing to take the risk of ability to win new members; but, if they knew that the only new members whom they could win would be others who were willing to take the same risk for themselves, it is likely that progress would stop, and that co-operation in insurance and

endowments would confine itself to the legitimate field, of giving men benefits at that cost which would provide for the risk assumed upon each life, for the cost incurred upon each endowment, and for necessary expenses.

WILLIAM MORSE COLE.

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## APPENDIX A.

### ARTICLE I.

*Section 1.* This body shall be known as the SUPREME LODGE OF THE ———, with power to make its own Constitution and General Laws for the government of the whole Order. Its decisions on all matters pertaining to the Order, and on appeals properly presented, shall be final.

### ARTICLE II.

*Section 1.* The objects of the Order shall be to unite in the Bonds of Equity, Security, and Peace all acceptable persons of sound bodily health and good moral character, from ten years of age upwards.

*Sect. 2.* To establish a Benefit Fund, from which, on satisfactory evidence of the disability of its members who have complied with all the lawful requirements of the Order, shall be paid the sum of Ten (\$10) Dollars per week for the term of five weeks in one year; and a sum not exceeding One Hundred (\$100) Dollars at the end of one year. The amount paid for sick or other accident benefits to its members shall be deducted with six per cent. interest from the amount of their certificate.

*Sect. 3.* In the case of the death of a member in good standing, who has been a beneficiary member for thirty days, the heirs of said member shall be entitled to ten per cent. of the certificate, less benefits that have been paid, upon the surrender of the certificate, or they may continue to pay the dues and assessments to the Subordinate Lodge of which the deceased was a member, and be entitled to receive the benefits at maturity; but they shall not be entitled to any other benefits from this Order.

### ARTICLE VI.

*Section 1.* The revenue of the Supreme Lodge shall be from Charter Supplies, individual charters and certificate fees, sale of supplies, printed matter, and from such assessments, not exceeding three, as may be called, according to law, to the General Fund for reasonably necessary expenses.

## ARTICLE VII.

*Section 1.* Whenever the condition of the Supreme Treasury shall make it necessary to levy an assessment to pay Sick, Accident, and Maturity Benefits, the Supreme Secretary shall at once notify every Lodge to forward immediately to the Supreme Treasurer the assessment due from every member.

*Sect. 2.* Fifty per cent. of the amount on each assessment is set aside by the Supreme Treasurer as a reserve fund; and it shall be promptly turned over to and invested by the Supreme Trustees, and shall only be withdrawn therefrom by the consent of a majority of members of the Supreme Lodge.\*

## LAW III.

*Section 1.* When an assessment is made, it shall be the duty of the Secretary to at once notify every member liable to said assessment. . . . Any member who fails to pay the assessment within thirty days from the date of the call shall stand suspended.

*Sect. 4.* When the amount received for one assessment, less the reserve fund, shall equal an amount less than One Hundred Dollars, the sum to be paid shall in no case exceed the amount of one assessment, less the reserve fund, and the said amount shall be all that can be claimed by any one.

## APPENDIX B.

## ARTICLE XII.

The cost of the first certificate shall be three dollars, and any subsequent certificate two dollars; and a purchaser shall not be allowed to hold more than one certificate in each class † in both divisions except it be by assignment. Additional certificates may be issued every thirty days, subject, however, to the same restrictions as govern the first and subsequent certificates. Each applicant shall, after certificate has been issued, in addition to the cost of certificate, pay to the Secretary within thirty days after the first and fifteenth of each month, in Division 1, the sum of one dollar and twenty-five cents on

\*The Supreme Lodge consists of the organizers of the order, and is in no sense controlled by the membership of the order at large. In this particular order the Supreme Lodge is nine in number. The objects mentioned in Art. II., Sect. 1, are accomplished in subordinate lodges.

†The class refers to the amount of the certificate, and the division refers to the frequency of assessments or periodic dues.



each certificate, and within thirty days from the first of each month, in Division 2, the sum of one dollar and twenty-five cents on each certificate. One dollar of each of the last two amounts named shall be carried to the maturity fund of the respective classes into which it was paid, and twenty-five cents to the general fund. Five per cent. of the above amount carried to the maturity fund shall be placed in the reserve fund, and can be used only to pay matured certificates at such time and number as shall be determined by the Board of Directors.

#### ARTICLE XIII.

Failure to make any of the payments on certificates, as prescribed in Article XII., shall work a forfeiture of all rights and privileges under said certificates; and all money paid shall be forfeited to the class and fund into which it had been paid, and the certificate shall be null and never reissued.

#### ARTICLE XIV.

When there is \$50 in class A, \$100 in class B, \$150 in class C, \$200 in class D, \$250 in class E, and \$300 in class F, paid into the maturity fund of these several classes in either Division 1 or 2, the subscriber holding the lowest numbered certificate in any of the above classes, in either Division 1 or 2, and has all assessments paid up to the date of such maturity, shall be entitled to the amount written in the certificate in such class, provided there has been paid in in assessments at least sixty per cent. of its face value; but, should the certificate mature before the sixty per cent. shall have been paid in, there shall then be deducted from the face value of the certificate the difference between the amount actually paid in in assessments and the sixty per cent. of the amount written in the certificate, and such amount shall cancel the certificate.

## NOTES AND MEMORANDA.

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It has never been easy to gauge the real strength of the "Nationalist" movement, partly because of the exuberant terms in which most statements of its progress, as seen from the inside, have been couched, and partly from the elastic use of terms in classifying persons as adherents. The impression has prevailed, however, for some time that the movement had lost its impetus, and was likely before long to count as one more on the list of decayed Utopias. This impression is confirmed by the announcement in the April number of the *Nationalist* that the publication of the magazine must be discontinued from the lack of support by Nationalists generally.

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STIMULATED by the example of Hungary and Austria, the administration of the State railways of Prussia has announced a general reduction of passenger fares. While the much-lauded zone system is not adopted,—the single kilometre remaining the unit of charge,—the usual rate on ordinary trains is much reduced, from 8 pfennigs to 6 on first-class, from 6 to 4 on second-class, and from 4 to 2 on third-class. Express-train fares are also reduced, though they still remain higher than on ordinary trains. The general reduction is offset in part, though not in great part, by certain changes in the other direction. Fourth-class is abolished; and the ordinary fare for fourth-class has been as low as the new third-class rate. Baggage is no longer to be carried free, though it is promised that the charge will be lower than that hitherto levied on excess baggage. Lower fares on return-trip tickets are done away with; and the tourist, foreign or native, is to be mulcted by the abolition of summer travel and excursion tickets.

It is calculated that the reductions on the travel of 1888-89 would have lessened the receipts by the total of 35,000,000 marks. The *Reichsanzeiger*, in announcing and explaining the changes, gives elaborate tables as to their effects, and takes pains to show that the rates will be lower, on the whole, and certainly lower on short-distance traffic, than they are under the remodelled tariffs of Austria and Hungary. The new *régime* clearly is due in good part to international rivalry.

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In the April number of the *Nationalist* a correspondent states the conditions which from observation he believes to be necessary for the successful establishment of a "co-operative colony," organized upon Nationalist principles. Besides the need of practical executive talent, too often lacking in such enterprises, the writer lays down also the fundamental condition that the colony must be large enough to dispense with all alliances with the differently organized society around it, and must be self-sufficing. This requires a considerable extent of territory and some diversity of resources.

To succeed, he says, a Nationalist colony should possess:—

1. Perfect title to from ten thousand to twenty-five thousand acres of land.
2. This land should be in a comparatively non-malarious climate.
3. It should be productive.
4. It should be east of the Mississippi, north of Memphis, Birmingham, and Macon, and south of the great lakes.
5. It should be unexhausted.
6. It should consist of from 75 to 100 per cent. of large growth oak, hickory, and poplar timber land, which, when cleared, would prove well watered and productive.
7. It should contain a superior quality of coal and iron in practically inexhaustible quantities.
8. Its members should pass a rigid examination with regard to industry, morals, language, and health.
9. It should number, as a minimum, one hundred families.

Were the members of such a colony all wealthy, it would prove under Nationalistic principles naturally practicable. Were they all poor, even Nationalism is not equal to the emergency of instantaneously securing

these results. Clearly, the poor colony must either work longer or wait longer. Nationalism, like all the universe, is subject to conditions.

These conditions, it will be admitted, should make success easy; but they threaten a serious restriction of outlook in the economic regeneration of sixty millions of people who have only one continent at command.

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THE *English Historical Review* for April, 1891, contains a valuable article by Miss Elizabeth Lamond, on the date and authorship of the book attributed to William Stafford, and often called his *Briefe Conceipt of English Pollicy*.<sup>\*</sup> New light has been thrown upon this early contribution to economic discussion by an examination of two manuscript copies, one in the Bodleian Library and the other in the library of Mr. Lambarde, of Beechmont, Kent, in whose family the copy has apparently been handed down for more than three centuries.

Examination of the manuscript copies, which are nearly identical, shows that the treatise must have been written in the reign of Edward VI., and probably late in 1549. In its original form it described the evils resulting from the decay of towns, the turning of arable land to pasture, the alterations in the coinage, and the rising prices which caused dearth in the midst of plenty. The date, it will be observed, corresponds nearly with the often quoted First Sermon of Latimer, preached before Edward VI. in Lent, 1549. Thirty years or so later "W. S." appears to have edited the manuscript, by changing passages which bore special reference to the time when it was written, substituting phrases referring to Elizabeth for those which referred to Edward VI., making some important omissions and one interesting addition, and then published it as his own. It is interesting to note that the passage inserted is stated by Miss Lamond to include the well-known reference to "the great store and plenty of treasure"

<sup>\*</sup> The full title is *A Compendious or briefe examination of certayne ordinary complaints, of divers of our country men in these our dayes*. By W. S., Gentleman. London, 1581. Reprinted by the New Shakspeare Society, in Series VI. of its publications, as a part of "Shakspeare's England."

as explaining the high prices of the time. This recognition of the effect of the gold and silver from the New World is therefore left as before with the date of 1581.

The doubtful identity of "W. S." is not made clearer by Miss Lamond's investigations; but a note written in 1565 on the Lambarde copy of the treatise, with other evidence, makes it probable that the author was John Hales (died 1572), of whom there is a short notice in the *Dictionary of National Biography*.

From a long passage upon the coinage, omitted by "W. S.," but printed by Miss Lamond, and containing much interesting discussion, we will cite here a quaint and clear statement of Gresham's law:—

Well than (q. the doctor) when goldsmithes, merchautes, and other skilled personnes in mettall do perceave that the one grote is better than the other and yet that he shall have asmoche for the worst grote as for the better, will not he laye up the better grote alwayes, and turne it to some other vse, and put forth the worst, being like currant abroad? Yea no doubt even as they haue done of late with the newe golde, for they apperceauange the newe coyne of golde to be better in estimation than the newe coyne in silver that was made to counteruayle it, picked out all the golde as faste as it came forth out of the minte, and laid that aside for other uses. So ye haue nowe but little newe golde more than the olde currant. And so both the kinges highnes is deceaued of his treasure and the thinge entended neuer the more brought to passe; and all is because there is no dewe proportion kepte be uene the coyne, while the one is better than the other in his degree.

## THE SINGLE TAX AND THE IMPÔT UNIQUE.

I have read with interest, in the January and April numbers of this *Journal*, the two notes concerning myself. The point at issue was the filiation which I had felt authorized to establish between the system of Henry George and that of the Physiocrats, in an article in the *Political Science Quarterly*.

I am obliged to decide in favor of my critic, and, what I regret much more, to decide against Mr. Samuel B. Clarke, who has so kindly and courageously undertaken to justify me. No: it did not enter into my mind to undertake any assimilation of the doctrines of Henry George to those of the Physiocrats on the question of landed property. I know the system of Henry George very well, for I was the first, I believe, to bring it to notice in France, by an article published as long ago as May, 1883, in the *Journal des Économistes*; and your readers will do me the honor to believe that I also know the doctrine of my compatriots, the Physiocrats. I recognize fully that the two doctrines are not identical nor even reconcilable, since the Physiocrats see in the institution of landed property the basis of social order, while Mr. George sees in it the cause of all the evils which desolate society.

What, then, was my meaning? Nothing more than to establish in favor of the French economists a claim of priority upon a particular point,—nothing more than what Henry George himself says in the words which I have cited,—that the Physiocrats long before him had the idea of an *impôt unique* on the land; that, for them, as for him, this *impôt unique* (single tax) was founded on a right of the State as coproprietor, and was intended to constitute a sort of common patrimony of the nation; that for them, as for him, this *impôt unique* was to have for its result the suppression of all other taxes, and was thus to give a vigorous impulse to industry and commerce and to simplify prodigiously the budget of the State.

It is true that, while the Physiocrats used this weapon of the single tax to consolidate property, Henry George wishes to use it to destroy property. But what difference does this make? It is still the same weapon used for different ends.

To avoid all misunderstanding, I should have said simply this: the Physiocrats were "single-taxists," but they were not "Nationalists."

CHARLES GIDE.

MONTPELLIER, April, 1891.

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#### THE DRIVEN-WELL PATENT.

Mr. Chauncey Smith, in his very interesting article in the October number of this *Journal* entitled "A Century of Patent Law," is in error in reference to one statement about the driven well; and that is where he states that the fact that the well had been in public use more than two years before Green filed his application for a patent "was not known to the Patent Office while the application was pending."

When Green filed his application, two patents had already been granted,—one to Suggett, March 29, 1864, and one to Mudge, October 24, 1865. Mudge soon after applied for a reissue of his patent, which reissue was pending when Green's application was filed March 14, 1866; and, as a result, an interference was declared between all three. The testimony taken and filed in the Patent Office shows that Mudge put down the first well in September, 1861; that he put down another for a Mr. Seymour in 1861; in 1862 he put down some six or seven, in 1863 some twenty, and in 1864 eleven,—making in all thirty-four or thirty-five wells in public use from two to five years before Green's application was filed, besides others put down by Suggett. All this was fully shown by the testimony filed in the Patent Office, so that the office was well aware of that fact.

Up to that time, however, it had always been held that the public use must have been without the knowledge or consent of the inventor or applicant, in order to work a forfeiture of

his right to a patent; and hence, as Mr. Smith says, the office would have issued the patent even with the knowledge of the public use before it, provided such use was by some other party and without the consent or knowledge of the inventor. When the case came before the Supreme Court for the last time, it was held that more than two years' public use by any one, whether with the consent or knowledge of the inventor or not, was an absolute bar to the grant of a patent, and on that ground held the patent to be void.

There were many curious facts in connection with that case. As above shown, the office not only had before it proof of nearly five years' public use when it issued the patent to Green, but it also had proof that it was with Green's knowledge and consent; for the first well put down by Mudge was at Green's residence and at his request. Moreover, the office records show that a patent was granted in 1840 to another party for the same method,—that is, by forcing the tube into the ground without drilling or making any previous hole; and in 1828 another patent was granted to still another party for the same manner of forcing down the tube, a hole being made in the earth by a pointed rod, and, when rock was encountered, by an expanding drill that would pass down inside the pipe and then expand and cut a hole large enough for the pipe to follow. These patents were not cited by the office; nor were they set up in any of the suits except the last, and only one of them then.

The litigation was equally strange. There were nine decisions in the Circuit Courts and four in the Supreme Court, the patent being sustained in all except the last. Another remarkable fact was that in his original patent Green described his method to be by first driving down a rod to make a hole, then withdrawing the rod and inserting the tube, and the claim in his original patent was limited to that precise method. More than three years after, and after others had discovered that the tube could be driven without first making a hole, Green reissued his patent, and changed the description and claim so as to cover the driving of the tube itself without first making a hole; and it was that reissued patent that the Supreme Court sustained when attacked, on the ground that the



reissue was broader than the original patent or invention,—a decision that is difficult of reconciliation with the decisions of that court on reissued patents before and since.

It is true, as Mr. Smith shows, that that patent has done much to create hostility to our patent system,—more, perhaps, than any other event that has taken place in connection with the system since its first establishment; and we all rejoice that it is now out of the way.

W. C. DODGE.

WASHINGTON, D.C.

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#### RECENT PROGRESS OF PROFIT-SHARING ABROAD.

The past three years have witnessed remarkable progress in the adoption of profit-sharing in Great Britain. For some years after 1875 the adverse influence of the famous Whit-wood colliery experience stood in the way of further experiments. In his work on *Profit-sharing between Employer and Employee*, Mr. Gilman, after noting the "small number of private firms in England now conducted on the profit-sharing plan," went on to say: "A turn in the tide has, however, taken place. . . . We may expect, then, to see a renewal of experiments in industrial partnerships by common business firms."\* This was written in 1888, and the prophecy has been amply fulfilled. Since then twenty-eight firms have adopted the system, thus more than doubling the number using it, and giving it a rate of progress unparalleled in its history.

The Parliamentary Report on the subject published last January gives a full account of the present condition and recent progress of the movement in England, with some notes on the system in France and elsewhere. The Report gives a list of forty-seven firms in Great Britain who use the plan of pure, as distinguished from indeterminate, profit-sharing. Four of these adopted the system in 1888,† six in 1889, and

\* Page 291.

† These are in addition to those given by Mr. Gilman for 1888.

twenty in 1890. The number of employees affected aggregates 7,694 for the twenty-five firms for which the numbers are given.

The progress of several of the firms which Mr. Gilman recorded \* as practising profit-sharing in Great Britain at the time he wrote is indicated in the Report, and is interesting as showing the working success of the system. The number of employees participating in profits with the firm of Cassell & Co., publishers, has increased 100 within two years. The average annual payments have been over £914, and in 1889 the provident fund amounted to over £9,000. The participants in the firm of Hazell, Watson & Viney, printers, have increased from 300 to 1,200, and the average labor dividend for the past two years has been £605. Bushill & Sons, printers, have made a gain of 50; and W. A. Hartley, of Liverpool, gained 300. Blundell, Spence & Co. report a decrease of 30 participants; but for the year ending March, 1890, they divided among their 310 workmen £1,027. In the case of the famous Huddersfield experiment in the "Woodhouse Mills," from which Mr. Gilman hoped so much, the number of participants is given in the Report as 150. Mr. Gilman gave it as 404, so that there has, apparently, been a partial failure here. The Report mentions nine firms as employing the system in 1888, in addition to the seven given by Mr. Gilman.

On the whole, then, the history of profit-sharing firms already established in England has been one of progress during the last two or three years. But the most remarkable point in the growth of the system is the great number of firms by whom it has recently been adopted for the first time. Twenty new firms began it in 1890. The most notable of these cases is, perhaps, that of the South Metropolitan Gas Company of London, employing about 3,500 men in winter and about 2,000 in summer. The company proposed that every workman should receive a percentage on his wages, regulated by the price charged for gas on a sliding scale, at the rate of 1 per cent. for every penny reduction in the cost per 1,000 feet of gas below 2s. 8d. That is, when the cost of gas is 2s. 8d. per

\* *Profit-sharing*, p. 285.

1,000 feet, no bonus is given. When gas costs 2s. 7d. per 1,000 feet, the workman receives one per cent. on his wages; when it goes to 2s. 6d., he gets 2 per cent.; and so on. The system was started by a gift from the company to every workman regularly in their employ on June 30, 1889, who should sign an agreement to remain in their employ for three months. This gift was 2 per cent. on his wages for the year ending June, 1887, 3 per cent. for the next year, and 4 per cent. for the third. This amount of 9 per cent. on one year's wages was placed to the workman's credit on the company's books, to remain in their hands at 4 per cent. interest for five years. By June, 1890, about 1,500 men were qualified to profit by the scheme, and received £5,377 in addition to their wages. The shares may be withdrawn in cash or left at interest with the company. There is a committee of management, consisting of the chairman of the Board of Directors, nine members elected by the board, and nine chosen by the employees. The officers of the company say that good results are already manifest. There is greater diligence among the men, they make suggestions for reducing expense, and, in general, they show a deeper interest in their work.

Clarke, Nickolls & Coombs, confectioners, of London, are another important addition to the list of profit-sharing firms. They pay over £30,000 a year in wages, and employ 1,000 men. Their plan is as follows: Net profits over 6 per cent. on capital are divided equally between the shareholders and employees. All who have spent one calendar year in the employ of the firm receive their bonus in cash. The bonuses of the others are invested in the stock of the company and set aside to form a provident fund. The bonus is proportioned to wages. No restrictions whatever, except the one year's period of employment, are laid on the workmen.

Another important firm adopting the profit-sharing policy in 1889 is that of W. D. & H. O. Wills, tobacco manufacturers, of Bristol. They employ about 1,000 hands. In 1889, 11½ per cent. was paid on the wages and salaries of the year.

These instances are typical of the recent revival of interest in the profit-sharing system in England. An examination of the provisions for division of profits shows that of the sixteen

new adherents of the policy in 1890, for whom returns are given, eleven paid the extra remuneration to the laborers wholly in cash, three paid part in cash and part to a provident fund, one paid all to a provident fund, and one paid in shares of the company. This reveals a great change in the mode of application of the system in England. The "stock system," that one which has in view making the workmen ultimately partners in the business, was long the most popular. But the recent cases show a rapid growth of the cash-payment system. This is the policy which has obtained in the United States. France has all along adhered mainly to the provident-fund form. The prevalence of different methods in the different countries is doubtless due to a variety of causes. In the United States the ascendancy of the cash-payment system is, perhaps, mainly due to the greater education of workmen, to their greater independence and self-reliance, and to the wide-spread system of savings-banks, which render unnecessary the care of the employer in providing a means of investment. If these reasons are correct, the change that has taken place in the mode of payment in England would seem to indicate a higher level of education and more general self-reliance on the part of the workmen than has hitherto prevailed. And the interesting question is suggested whether this is not one of the first-fruits of the more excellent system of popular education that went into operation some fifteen years ago. It certainly seems that the average English workingman of the younger generation is better informed and more intelligent than his father, and his independence and self-reliance seem greater. Indeed, the extension of the profit-sharing system is itself a sign of increasing education and intelligence.

It is interesting to notice the extension of the system in agriculture, a field in which it has hitherto had but a limited application. The New Zealand Farmers' Co-operative Association is mentioned in the Report, but no details are given. In England itself the system has been introduced on the "Trafalgar" estate, owned by Mr. George Holloway, M.P. The estate contains one thousand acres, tithe free, at a rent of £375 a year. The stock, tools, working capital, etc., are valued at nearly £5,000, on which 5 per cent. per annum is

charged until the amount is repaid. Mr. Holloway is to pay current wages. If the profits reach 5 per cent. per acre, "those who have been employed not less than six months of the year will share in any profit that has been made during the year in exact proportion to the amount of wages received." The amount due each person is to be credited to him in the farm accounts, and will bear interest at 5 per cent. until withdrawn. The amounts thus credited are to be applied to pay off Mr. Holloway's loan. Any member withdrawing from the scheme forfeits one-fourth of the amount due to him. As soon as the capital of £5,000 is paid back, all future profits go to the workmen in cash, in proportion to the amount contributed by each to pay off the debt. The owner will then continue to draw only his rent of £375. The plan bears some points of resemblance to Godin's system at Guise.

In France, the original home of profit-sharing, the system has continued to extend. The famous old establishments are in a flourishing condition still. At Godin's celebrated institution there are now some 1,600 hands, 961 of whom received additions to their wages in 1889. This is on the stock system. The Piat Iron Foundries, at Paris and Soissons, paid 4 per cent. of wages in 1889 to 206 employees. The celebrated paper manufactory of M. Laroche-Joubert has a capital of nearly £200,000, and employs about 1,500 persons. During the ten years, 1879-1889, it paid £44,880 in dividends on wages.

There have recently been some changes in the famous Maisson Leclair. M. Marquot, M. Leclair's old secretary, died last December; and, in supplying his place in the management, the remaining partners doubled the capital. The benefit society and M. Redouly, the surviving partner of the old *régime* doubled their shares, and the remaining 25 per cent. was subscribed by two new partners. The total capital now is 800,000 francs. The principles laid down by the founder of the house with reference to profit-sharing are strictly adhered to. According to the present organization, 5 per cent. of gross profits goes to capital, and the remainder is divided between "labor," "management," and the benefit society in the proportion of 50, 25, and 25 respectively. In 1889, 228,000 francs

were paid over in cash to 959 participants, who also drew in wages 1,085,230 francs.

Of new profit-sharing firms in France, the Report gives one under date of 1889, five under date of 1890, and nine others without date. As these are not given in Mr. Gilman's list, it is likely that they have adopted the system since he wrote. The total number of profit-sharing firms is given as seventy-nine,—an increase of twenty-two in three years.\* But firms using the indeterminate system are included.

Profit-sharing has had to win its way against the prejudices of employers and the ignorance and impatience of workingmen. It has also had to contend with the influence of labor organizations. On this point the Report says: "The organizations of workingmen which have obtained such great influence in recent years, and might be supposed the best representation of their interests, are not advocates of profit-sharing. On the contrary, their attitude, while not affirmatively hostile, is unsympathetic." The main reason seems to be that expressed at the Liverpool Congress of Workingmen, where it was declared that "it would be difficult to consolidate organization in any body where a system of deferred pay, either in the form of pensions or perquisites, prevailed." Of course, this refers to organization for the purpose of coercing employers, as by means of strikes. So far as these are used to secure higher wages, profit-sharing probably tends to diminish their number. But it does so by removing their cause; for profit-sharing is to supplement, not to replace, wages. And "the just regulation of current wages is one of the conditions precedent to the efficient working of a profit-sharing system." Moreover, the regulation of wages may still remain a function of the labor union.

Still, it would be rash to say that the labor organizations are wholly wrong in their opposition. For opposition to a reduction of wages might, conceivably, be lessened by the knowledge, on the part of the workingmen, that their opposition would cause them the loss of their surplus, and that under profit-sharing the net reduction would be less than otherwise. And, again, the policy has not been tried sufficiently to show

\* See Gilman's *Profit-sharing*, p. 390. Of course, this is on the supposition that Mr. Gilman's list is complete.

whether this induced conservatism might not furnish opportunity for oppression on the part of unscrupulous employers. Nor are the social possibilities of the system sufficiently clear to merit unqualified approval. In the line of social results, the stock system would seem to promise most. This gradually makes the laborers part-owners of the business, and tends, therefore, to the establishment of limited co-operation. It is not a fair objection to this method to say that the object of profit-sharing is not to increase the number of capitalists, but to better the relations of capital and labor. The improvement of these relations is not the ultimate end: that is the evolution of better social relations in general. If that object can be better attained by the replacement of the present system with another rather than by its mere improvement, whatever helps to bring that replacement about must be welcomed. Certainly, experience shows that profit-sharing opens the way to some improvements, even if it does not justify the enthusiastic remark of Von Thünen, that it is "the only salvation of the laboring class."

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#### AMERICAN JUDGES AND THE INTERESTS OF LABOR.

In a few words of introduction to a valuable "Report on Social Legislation in the United States for 1889 and 1890," published in the *Economic Review* for April, by Mr. L. S. Merriam of the Johns Hopkins University, Professor Richard T. Ely makes the following observations about American judges and lawyers:—

One other fact must be borne in mind in every consideration of social legislation in the United States, and that is the influence which our constitutional system gives to judges. Our judges not only interpret laws, but annul laws which conflict either with State constitutions or the federal constitution. When one reflects upon the vague and general character of these many instruments, and of the various interpretations which may be given to many of their provisions, one becomes aware that judges are our supreme rulers. We have, to an extent unknown



in any other country in the world, government by judges. What does this mean to the student of social legislation? It means a great deal, and—the fact cannot be disguised—it means a force, on the whole, adverse to the interests of labor. American judges, as nearly as I can gather, are much like English judges in their social views; but they have an opportunity for giving weight to their subjective opinions unknown in England. There can be no doubt that judges in every country are more solicitous for the rights of property than for the rights of person, and it is the rights of the person which are of paramount concern to the masses of the people. This subject, of the influence of judges in the United States upon the position and prospects of the working classes, is one which deserves very careful treatment; and, in this place, I cannot do more than merely allude to it, and to add that the only practicable remedy in the United States seems to be a broader, more liberal, and more thorough education of the lawyers, who are our ruling class. At the present time the training which our American lawyers receive is, as a rule, woefully deficient, and cannot entitle them, as a whole, to the rank of a liberal profession. They follow a trade rather than a profession. The condition of legal education in this country becomes apparent when it is stated that the political and economic science implied and expressed in Blackstone's Commentaries on the Laws of England is still regarded as sound doctrine by at least nine American lawyers out of ten.

It is a pity to publish in a foreign review such crude observations as these. Our judges do not "annul laws": they simply interpret and apply them. Our peculiarity is that we furnish to judges for their interpretation a law, unknown elsewhere, which controls the legislature itself and by which the validity of *its* action as well as that of private persons is to be tested. It results that a legislative act, when thus tested, is sometimes found not really to be a law. To declare this result is not accurately described as "annulling a law." Those who wish to work in "the interests of labor," or of anything else, are confined by our political system (not by our judges) within the limits of the Constitution. This is not "government by judges," or making "judges our supreme rulers." It is government by the people through a written constitution. It is, indeed, giving to judges a new and most important document to interpret and apply; but it is adding nothing to the function of the judge which is different in kind from that which he exercises everywhere.

That this adds much to the power of judges is not to be



denied; nor is it doubtful that as a class, here as elsewhere, the judges are among the conservative elements of society. But how rash and uninformative are such statements as these: that judges are "a force . . . adverse to the interests of labor"; that "American judges . . . are much like English judges in their social views"; that "judges in every country are more solicitous for the rights of property than for the rights of person"; and that "it is the rights of the person which are of paramount concern to the masses of the people"! The great majority of our judges are chosen by popular election for limited terms; and the chief cause for anxiety among thoughtful persons here has always seemed to be a too great, and not too little, solicitude on the judges' part to meet the wishes of the "masses of the people." The "social views" of our judges are like those of their neighbors. The notion that as a class they are in any peculiar sense "adverse to the interests of labor" has nothing to support it. An odder chimera than this fancy of something baleful in the "influence of judges in the United States upon the position and prospects of the working classes" it would be hard to find.

For the cure of this supposed evil Professor Ely recommends "a broader, more liberal, and more thorough education of the lawyers." Is it, then, the less educated judges whose "social views" come nearest to those of the English judges and who are most "adverse to the interests of labor"? That is not commonly thought. That such judges and all judges, as well as all men and all women, are likely to be bettered by bettering their education, is easily seen. That this will diminish the efforts or the power of the judges to keep "social legislation," as well as all other, within the limits of the constitutions is much less obvious.

What is meant by calling for a better education of the lawyers? a better legal education? or a better education in "political and economic science"? Professor Ely's wild observation as to the acceptance of Blackstone's views on these subjects by "nine American lawyers out of ten" would lead one to suppose that he was thinking of this last sort of training. The views of our lawyers and judges on such subjects are probably not different from those of other men in like

position. *Legal* education has been, indeed, in a very backward condition, in England as well as here, although great efforts are now being made for the improvement of it. But it is more than doubtful whether any improvement in legal education will mend matters in Professor Ely's point of view. The better the lawyer, the more clearly he sees that it is not political economy that he is to interpret and apply, but law; and that in interpreting our Constitution he is not to ask what is the latest or justest meaning of its terms, in a scientific point of view,—of such phrases, for instance, as "direct taxes," "money," "the taking of property," and the like,—but what is their legal and historical meaning, their meaning as they are used in this particular instrument.

Notwithstanding all this, it must be admitted, we repeat, that the power of our judges is very great,—necessarily and properly so. But we take the opportunity to remark that this power is often set higher than it should be through a failure to observe that, in a great proportion of the cases relating to the constitutionality of laws, the true question for the judges is not what their own opinion of the true interpretation of the Constitution is, but what view of it is reasonably permissible. The judges often recognize this, but also they often fail to recognize it. And, as a consequence, there is a common impression that legislative power, under our system, is far more strictly tied down to judicial opinion than it really is. But we cannot enlarge upon this topic here.

JAMES B. THAYER.

ON EMIGRATION FROM THE EUROPEAN POINT  
OF VIEW.

In the *Quarterly Journal of Economics* for January last Professor Richmond Mayo Smith kindly called attention to my article on "L'Émigration Européenne" in the *Revue d'Economie Politique*, offering some critical remarks which induce me to take up the question again. An inquiry into the general European emigration movement led me to two conclusions: first, that emigration is to be considered as a normal function of the present condition of European life; second, as an inevitable consequence, it cannot be expected to cease before the most essential causes shall have disappeared, unless some practical obstacles should put a check to it. Those essential causes are the present economical conditions, and therefore the European emigration will flow on till a state of equilibrium shall have been reached between economic conditions in Europe and the countries to which the emigration is directed.

As for the first thesis, Professor Smith, condemning it altogether, declares that "any country whose prosperity depends on the constant expatriation of a portion of its citizens stands in an equivocal position, and it seems to me impossible to regard emigration as a permanent and normal function of European life." The second thesis would need a more thoroughly explained theoretical foundation. But, as the interest of the question does not lie on the theoretical side, I may pass this by, and observe that Professor Smith is here led to start the practical question, whether it could be desirable for Americans with respect to their higher standard of life to allow the levelling work of European emigration to go on. His further remarks do not touch my meaning, since I certainly never pleaded the cause of emigration in order to promote the "expansion of Europe" or to admire the "star of empire" taking its way westward.

The criticism of Professor Smith on the first thesis rests on the assumption that emigration is regarded by me as a remedy for over-population, which threatens Europe on account of

the birth-rate of its countries being very high. That Professor Smith really believes this to be my supposition becomes evident by his reference to France, where, emigration being on a small scale, the growth of population is very slow. Then he continues:—

Why is not that the normal condition of things; and, if emigration were to stop (not suddenly, of course, but gradually), why would not other countries regulate their population according to the new conditions? It seems to me just as logical to take hold of the question from the other end and to formulate the rule that emigration is no remedy for over-population.

Now, I perfectly agree with this rule, and have, moreover, emphatically stated it in one of my own essays on emigration which Professor Smith has quoted.\* But this rule does not answer the question whether the increase of population has the tendency to promote our expansion by emigration rather than to alter the economical and social organization of society. The question whether it is possible to make room by new political and social institutions for other millions of people or not, and the question of lowering the increase of population after the French fashion, deserve to be studied; but they belong to quite another chapter of the investigation into the movement of European society. They have nothing at all to do with our explanation of the causes and strength of the emigration of to-day and its relation to our present society.

There exists no absolutely permanent institution; and to judge a social fact to be normal does by no means involve the proposition that it must be a "permanent" one, whatever the state of things may be. From the evolutionist's standpoint there are no "normal things" in this sense, all human institutions constantly changing in the endless flow of time,—*πεὶ τὰ πάντα*. But the theoretical question we have to put is this: Is it possible to explain the European exodus by causes which make its extinction in a not too remote time probable, or are the conditions such as to produce emigration as an inevitable consequence? As far as I see, this is the solution of the problem: The extension of European commerce and

\*In the *Handwörterbuch der Staatswissenschaften*, vol. I. p. 1012.

trade in the course of this century, the increase of regular shipping opportunities to all harbors of the world, the increased speed of the voyages, the cheapness of the fares, have practically shortened the distance between Europe and the other parts of the world. They have brought the remotest part of the globe within the intellectual horizon of all classes of our society. That has caused a more frequent and more regular personal and written communication of emigrants with their relatives, and the consequence is the spread of information upon the conditions of life outside of Europe among all who are unsatisfied with their lot. I have had many opportunities of seeing how far this goes, finding American newspapers in the cottages of solitary valleys in the Black Forest, which were hardly, as one would believe, reached by the news of our own national affairs, but are inhabited by peasants who tell us of their sons or brothers who are *drüben*, "over there," as the common expression is. Add to this change of time and space as regards inter-oceanic intercourse the dissolution of historical forms of organization in European society, the transformation into an individualistic industrial society, and the restless aim of every individual to improve his economic condition. Under the influence of these facts, the European population becomes an easily movable mass of atoms, which follow almost the slightest economic attraction of foreign countries, if it is not paralyzed for the individual by greater advantages here or by external hindrances. Regarding the relative attractions of foreign countries for Europeans, we must bear in mind that they are, in spite of all increased ease of traffic, still remote enough to allow the individual fancy its full play, and to awake expectations which imagination is not slow to realize. Therefore, European emigration will never cease completely. However widely the characters of periods may differ, the European emigration rate shows only oscillations which correspond to the main economical features of the period; but it does not stop, for even in the most prosperous times here and the worst times there, single forces will be at work. If the experience of a hundred years suffices to support a thesis, my proposition must be fairly well founded. The example of France, which Professor Smith uses against me,

cannot stand against the proof of all other countries of Europe. *Exceptio probat regulam.* The movement of the French population is looked upon by all Europe as an abnormal one; and even in France distinguished economists, like Leroy-Beaulieu, Levasseur, Bertillon, and others, have called attention to it as to a deplorable fact. Professor Smith himself gives proof of the normal character of the European emigration, according to the present increase of European population, by supposing that a gradual stopping of emigration would cause a regulation of the population according to the new conditions. Were it a passing fact, it might stop suddenly, and alteration of customs, moral and social institutions, would not be necessary.

That the regulating forces of the emigration movement lie in the differences between the economical and social level here and in the immigration countries, seems to be demonstrated by the facts. While in 1826 of 10,837 immigrants at New York 7,709 came from the United Kingdom, in 1827 their number increased to 11,952 out of 18,875, and in 1828 to 17,840 of a total of 27,283; but in 1829 their number fell to 10,594 of 22,530, and in 1830 to 3,874 of 23,322 souls. These fluctuations were due to the great commercial crisis of 1826, the distress in the manufacturing districts of England and the famine in Ireland. The conditions growing better, the number of emigrants decreased. The ten years from 1845 to 1854 were years of a terrible economic distress in Ireland and South Germany, caused by hard winters and bad harvests. And these ten years show the highest emigration from Ireland as well as from Germany. The number of emigrants actually started were 1,226,936 here, 1,512,000 there. Such tremendous figures have never been reached again. On the other hand, the influence of the economic and social state in the United States may be seen by the following figures. In 1838 the total of immigration, which amounted in 1837 to 79,340, decreased to 38,914; and in 1839 and 1840 it increased again to 68,069 and 84,066 respectively. The reason of the decrease was the great financial crisis of 1837, which shook the foundation of the whole industrial and agricultural life of the United States. Again, the influx of aliens into New York

was smaller in 1858 and 1859 than in any previous year, for the reason that the commercial crisis of 1857 had frightened those who wanted to make a living by the labor of their hands. The number of immigrants, which in 1857 reached the figure of 186,733, in the following two years fell off to 78,589 and 79,322 respectively.\* The number of examples could be increased, but I think even those I have enumerated will suffice. They show clearly the tendency of the regulating forces in emigration. In the shortest way, it may be stated in the words of the last report of the Emigrants' Information Office:† "The amount of emigration in any one year is obviously determined by the state of the home labor market, on the one hand, and the prospect of remunerative employment in the colonies or foreign countries, on the other." This is the view which I was maintaining.

The fluctuation of emigration, according to the economical aspects in foreign countries, seems to me to prove that extraordinary measures for putting a stop to immigration are unnecessary. Nobody leaves his home, where customs and law, language and relations, make the way easier to him, if he has no hope to better his position in the struggle for existence by emigration. I do not mean to say, of course, that he will go wherever men live in better conditions, but where he can hope to reach the same. There is a great difference between these two cases. The present situation in the United States is certainly not so bad as to leave no more room for new immigrants. The country rich enough to maintain hundreds of millions, inhabited by an energetic population with a keen spirit of enterprise, will still produce for some time an extraordinary demand for labor and give certain opportunities to new settlers.‡ But still the economic disturbances of the last few years have produced a feeling in Germany and England that the United States are no longer to be looked upon as the ever-

\* Compare Kapp, *Immigration*; and Report of the Commissioners of Emigration, New York, 1870.

† For the year ending December 31, 1890.

‡ Perhaps it seems curious that I venture to judge from afar about this question; but I may quote the brilliant essays of David A. Wells, *Recent Economic Changes*, whose conclusion that we are in a period of general movement upward embraces the United States even more distinctly than any other country.

lasting emigration field for European nations. Pamphlets, articles in newspapers,—especially warnings in the papers of the laboring classes,—official expressions like that of Mr. Giffen before the Colonization Committee,\* begin to work in this direction, and will after some time be successful. Ideas do not work so promptly as machines, but their slow working produces at last a powerful effect. I have not the slightest doubt that the European emigration will, to a great extent, turn away from the United States as soon as the economical and political situation of South America promises a secure and steady development. It is remarkable that at the present time the only influx of immigrants to the United States which shows no important restriction by the natural impediments of social affairs is that of Austro-Hungarians and Italians, who are not yet bound to the United States with so strong a tie as Germany or England, and who are therefore not so sensible to the change of economic conditions as the latter are. The backward state of public education, too, is very likely to hinder a rapid accommodation of the popular ideas to the real facts. The conclusion I should draw, therefore, is that the greatest care should be given to the extended and thorough-going information of the public about the actual conditions in immigration countries.

The American feeling seems to go beyond this. The movement for restriction of immigration is, as far as I can see, growing stronger every day. I do not dream of condemning it, as far, at least, as the principle is in question. It is an undeniable right of a sovereign state to regulate its affairs according to its own wants. But, with us in Europe, the living together within a small space during centuries, and the friendly and hostile contact in which the states have stood over and over again, have produced a custom of international intercourse which handles such questions with some careful consideration of all possible effects. The Americans, on the other hand, show sometimes a somewhat highly developed sensibility whenever international relations burden the public without yielding immediate advantages in return. And, curiously enough, a commonwealth which has the his-

\* *Report on Colonization*, Parliamentary Papers, 1890, No. 354.



torical right to be proud of the name of the freest country and of the most liberal constitution the history of mankind has ever produced, is inclined to employ in its external relations mechanical means which would never be thought possible in its internal policy.

I think Professor Smith, in his excellent book on *Emigration and Immigration*, has drawn the limits of every restrictive policy in immigration with the utmost accuracy. I cannot concede that the reproach is justified which is involved in the concluding question of his quoted article, as if I would dispute altogether the right of nations to restrict immigration. I do not dispute it at all, only I take it for granted, not only with regard to the United States, but for the civilized world, "that absolute prohibition of immigration is neither necessary nor desirable"; that the only possible thing is "to establish some process of selection by which the immigration of undesirable persons shall be discouraged."\* We differ, perhaps in the conception of the possible effect of such a process. I have some slight doubts whether it will work to the satisfaction of those who wish to diminish the number of immigrants in general, and not merely to stop the entrance of sick and invalid, immoral or criminal persons. The artificial process of selection, as long as it is not practical prohibition, will stop the thousands, but the hundred thousands will go unhampered. Stopping these, too, by the mechanical means of prohibition would disturb international intercourse and damage numberless interests in the United States themselves. But why should we not trust the efficiency of that simple but always efficient process of natural selection? Would it not be better to keep the artificial restriction within the narrow limits of its undeniable necessity in respect to distressed persons, but, on the other hand, to promote by all possible means institutions and organizations to strengthen the natural tendency of given impediments? I am convinced that emigration cannot longer remain what it is, a stream without dams. I do not think we could stop easily the springs of it, but I hold it the duty of the State to embank the rising waters and to give them the right direction.

\* R. M. Smith, *Emigration and Immigration*, p. 279.

It is an old experience of the history of European states, that all social movements become an object of State administration as soon as they come to have an important influence on the common interests. In our days it is so with emigration, which has become a steady element of the national life of the European population. Already we have signs of the beginning of a positive emigration policy in the United Kingdom, in Switzerland, in Belgium; and various movements in Germany tend to the same end, as I hope with success. The institution of the Emigrants' Information Office, the State-aided Emigration Movement, the Emigration Department in Switzerland according to the law of March 22, 1888, the "Service de Renseignements concernant l'Émigration" in Belgium, are important facts on which the adherents of a restrictive immigration policy in the United States ought to look with satisfaction. Certainly, organizations effected by responsible European governments work for them in Europe. These may exercise an immense moral influence, not only by giving clear information about foreign countries, but also by directing the movement in the way that is the most desirable according to international relations. First of all, these offices are for the interests of the European communities; but that does not prevent their agreeing with the interests of the Americans, too. They work under publicity, they must care for international agreements as well as for the law of foreign countries, and have not the slightest interest to push forward emigration by artificial means, as irresponsible private agencies do. But private forces may be used by these offices in various ways so as to make their efforts more efficacious to direct the emigration or to restrict it, as the case may be. The United States as well as any foreign country could give a great help to such institutions by handing over to them all desirable information and warnings. Let them work for some years, and we shall have in them an apparatus which, if well managed, will cause much good on both sides of the ocean. I think it would be worth while to consider whether by means of commercial treaties the interests of Europe and of foreign countries in this matter could not be brought to harmonize. What Europe has to promise is not to stop emigration, but to

use official means to hinder people from taking steps which will lead them to misery and distress. That is our interest as well as that of foreign countries, which would have to pay the costs of our indifference in respect to the lot of our countrymen. To produce an international consciousness that it is our duty to go hand in hand in questions of emigration, seems to me to be a problem of so high a character that the best men ought to work together to promote it, here and "*drüben*."

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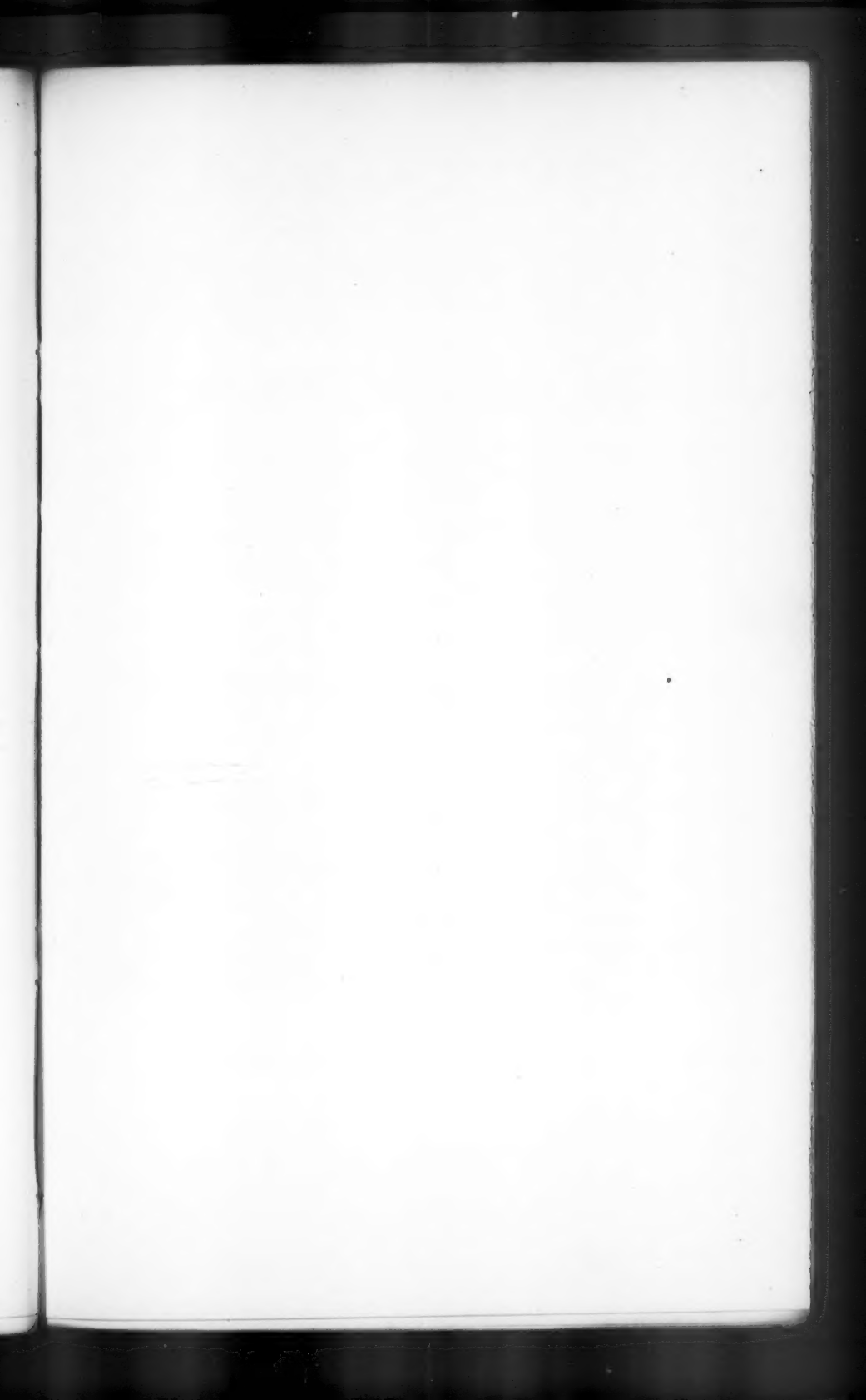
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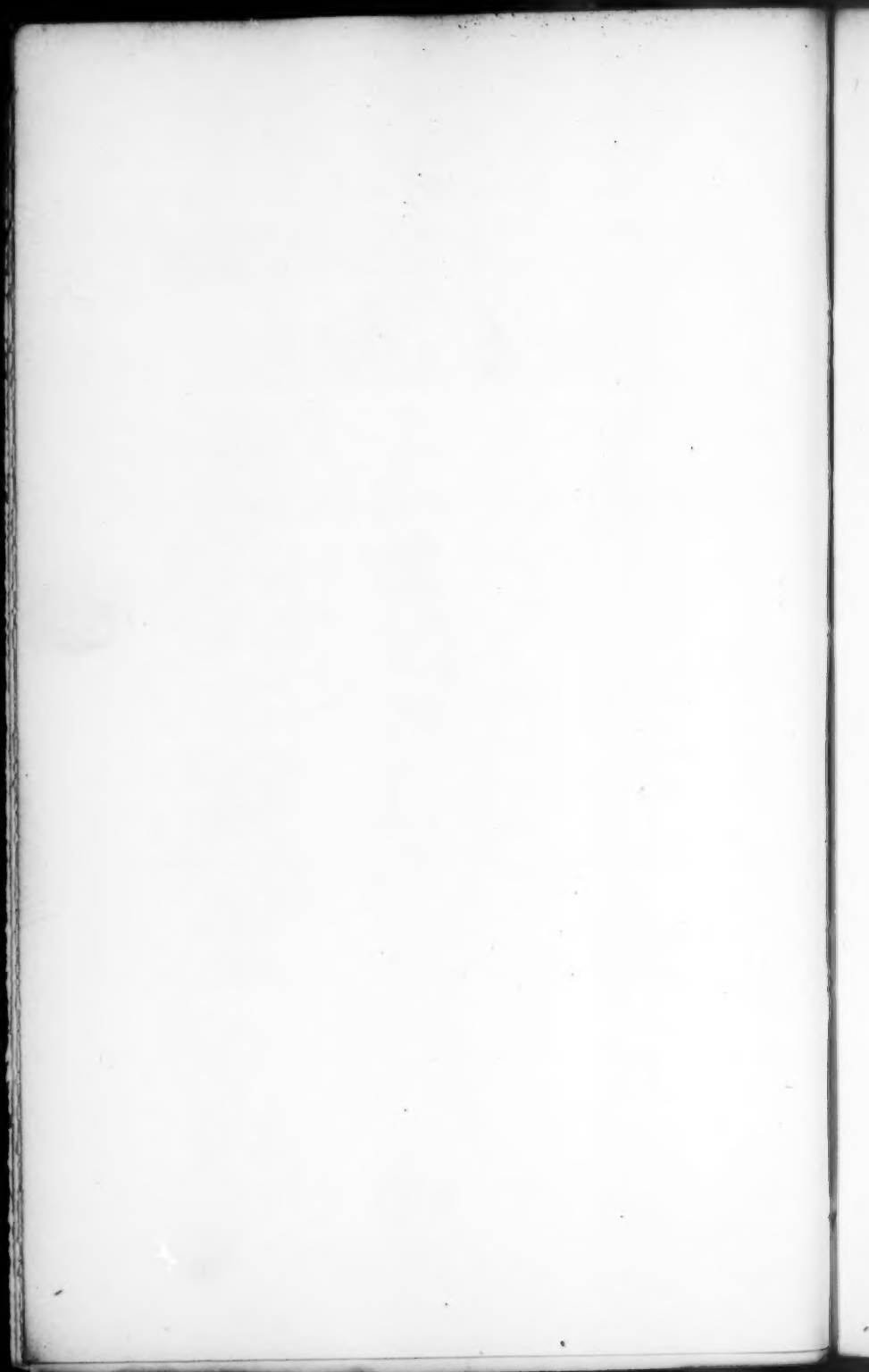
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